

DEPARTMENT OF AGRICULTURE & FORESTRY

SEED PROGRAMS

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## INTRODUCTION

High quality agricultural seeds are a basic and important input for successful agricultural production in Louisiana. This publication provides for upgraded and consolidated standards for certifying high quality seed crops and other propagation materials in Louisiana. Regulations are provided for thirty-six different commodities. Never before have all of the standards been consolidated into one convenient reference source.

In the course of conducting multiple public hearings throughout the state, a broad spectrum of new certification procedures and standards were obtained from farmers, seedsmen, and agricultural scientists. Louisiana Seed Commission members are Commissioner of Agriculture & Forestry, Vice Chancellor and Director of the Louisiana Cooperative Extension Service, Director of Louisiana State University Agricultural Experiment Station, President of the Louisiana Seedsmen's Association, President of the Louisiana Farm Bureau Federation or their designees.

The Louisiana Department of Agriculture & Forestry will continue to promote and make available certified seed and propagation materials of superior performance, quality, and known genetic identity.

  
Commissioner

## STAFF RECOMMENDATIONS

### Suggestions and Procedures for Certifying Seed

- A. Contact the Louisiana Department of Agriculture & Forestry, Seed Division or ask your Parish Extension Agent for certification applications and regulations for the seed crops that can be certified.
- B. Use production fields that have no history of troublesome or noxious weeds, and that meet the previous cropping and present isolation requirements for the seed crop to be grown.
- C. Select a seedstock class such as breeder, foundation, or registered seed for planting that can be recertified. Save one of the seedstock tags and all purchase records for each variety planted and send these in with your application. If you use your own seedstock, submit a letter indicating the source and year of production for this seed.
- D. Send your applications, tags and invoices, fees and detailed field maps prior to the deadline dates to the Louisiana Department of Agriculture & Forestry, Office of Management and Finance Accounts Receivable, P.O. Box 3481, Baton Rouge, LA 70821-3481. Phone: (225) 922-1255.
- E. Thoroughly clean all planting equipment before planting the seedstock. Use chemical weed controls and follow cultural practices recommended by your Parish Extension Agent.
- F. Rogue seed fields to remove other crops, off-type plants, and noxious weeds before requesting a field inspection.
- G. Growers are to call the Louisiana Department of Agriculture & Forestry District Office in their area at least 10 days before harvest to request and schedule an inspector to make a field or other required inspections.
- H. Thoroughly clean all harvesting, transporting and storage equipment before and between harvesting different varieties or other seed crops in order to avoid mixture.
- I. Monitor seed moisture, temperature and quality in storage. Aerate if necessary. Send your own service sample to the seed laboratory prior to conditioning in order to monitor seed quality in storage.

- J. Notify the Office of Agricultural & Environmental Sciences prior to any grower to conditioner transfers, sales, purchases or changes in the ownership of Louisiana Certified seed.
- K. Condition all seed at an approved seed plant. A list of approved conditioners is available from the Office of Agricultural and Environmental Sciences. Palletize bags or store seed in bulk areas such that representative samples can be drawn.
- L. Contact the Louisiana Department of Agriculture & Forestry District Office in your area to request an inspector to draw an official certified seed sample for laboratory analysis. Seedsmen should be present at the time of sampling in order to assist the inspector in location the seed and in recording the correct information regarding variety and lot number identities.

Louisiana Department of Agriculture & Forestry  
Seed Division  
State Seed Testing Laboratory  
Baton Rouge, LA 70821-1108

The State Seed Testing Laboratory is a function of the Louisiana Department of Agriculture & Forestry. The laboratory tests seed by measuring their quality in terms of pure seed, presence of weed seed, amount of inert matter, other crop seed content, percentage of germination and the percentage of hard seed. Vigor, varietal purity, and other special tests are also conducted. The laboratory receives its samples for tests from two sources. Department of Agriculture and Forestry inspectors collect seed samples from seed retailers and wholesalers to determine if the seed offered for sale is correctly labeled as required by the Louisiana Seed Law. Inspectors also draw certification samples from seedsmen to determine whether the lot of seed meets the high quality standards for certified seed. A very important source of samples is from our Louisiana farmers who submit samples for testing to determine if the seed he intends to plant is of a quality suitable for planting.

A sample for test is made up of a small quantity of seed taken from representative bags in the lot or several locations in a storage bin. The approximately one pound sample is mailed to the State Seed Testing Laboratory, Louisiana Department of Agriculture & Forestry.

Tests are made in strict accordance with rules adopted and followed by all seed testing laboratories. The rules specify in detail the procedure and environmental conditions each kind of seed must receive while in test. The sample received at the lab is transferred to containers suitable for storage and assigned a laboratory number. A work card is made up carrying the laboratory number, date of receipt, source of the sample and other pertinent information. The sample is well mixed and processed first through purity. The purity analyst takes a small part of the mixed sample and, by checking each seed, separates into pure seed, inert matter, weed seed, crop seed and noxious weeds. Inert matter is the trash material in the sample. Crop seed is seed of some crop other than that under test and could be another variety that can be separated by visual examination. Weed seed are seed which are not grown in this state as a crop. Noxious weed seed are from plants very difficult to control or eradicate once it is established and are specified by laws as noxious in Louisiana. Some are considered noxious to prevent their distribution in Louisiana from other states or foreign countries. These separations made by the purity analyst are weighed and the percentage of each is entered on the work card. The pure seed of the separated sample, with the work card, travels next to the germination room.

We use no magic formula for testing seed; therefore, we must test the seed under conditions similar to those in which nature intended the seed to grow. Germinator cabinets similar to a home-type refrigerator, except large in size are used for sprouting seed. These cabinets are equipped with devices which provide the correct combination of light, temperature and moisture for germinating the particular kind of seed under test. Some kinds of seed require high temperature, light during the day and dark nights while other kinds of seed may require a much lower temperature and darkness for proper germination. The laboratory is equipped with a number of germinator cabinets with temperature, moisture and light pre-set for germinating the different kinds of seed normally grown in Louisiana.

The pure seed sample as received from the purity analyst is then planted following the ARules@ and after the prescribed time, all normal sprouts are removed. A seed is considered germinated when it sprouts and produces a normal root and shoot system. This will take about four to seven days for cotton, corn and soybeans. It may require 28 days for Bahiagrass and 21 days for Sericea Lespedeza. The sample will be checked often during the test period to assure that there is correct temperature, moisture and light. Upon termination of the germination test the percentage of normal sprouts is totaled and the percentage calculated and this figure is entered as the germination. A germination of eighty percent indicated on a test report means that eighty out of each one hundred pure seed submitted for test are capable of producing a normal sprout under good growing conditions. This figure is very important in estimating the probability of a field stand.

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Eric Gates, Director  
Seed Programs

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Lester Cannon, Assistant Director  
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## Subchapter B. General Seed Certification Requirements

### '123. Classes of Seed

*Breeder Seed* - Seed directly controlled by the originating or sponsoring plant breeding institution, firm or individual which is the source for the production of seed of the certified classes.

*Foundation Seed* - Progeny of breeder or foundation seed, handled so as to maintain specific genetic purity and identity, production of which must be acceptable to the Department of Agriculture and Forestry.

*Registered Seed* - Progeny of breeder or foundation seed, handled under procedures acceptable to the Department of Agriculture and Forestry to maintain satisfactory genetic purity and identity.

*Certified Seed* - Progeny of breeder, foundation or registered seed, handled under procedures acceptable to the Department of Agriculture and Forestry to maintain satisfactory genetic purity and identity.

#### *Tree Seed*

1. *Certified Tree Seed* - Seed from trees of proven genetic superiority, produced so as to assure genetic identity. Seeds from interspecific hybrids of forest trees may be included.

2. *Selected Tree Seed* - Progeny of rigidly selected trees or stands of untested parentage that have promise but not proof of genetic superiority and for which geographic source and elevation is stated on the label.

3. *Source-Identified Tree Seed* - Seed from:

- a. natural stands with known geographic source and elevation, or
- b. plantations of known geographic origin and which is acceptable to the Department of Agriculture and Forestry.

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:564 (November 1982), repealed and readopted LR 12:825 (December 1986).

## 125. Definitions

*Certification*—the process by which official recognition is given to seeds produced under a limited generation system which ensures genetic purity and identity and a given minimum level of quality.

*Germination*—the percentage of seeds capable of producing normal seedlings under ordinarily favorable growing conditions.

*Hybrid*—one or more crosses of inbred lines of the same kind of seed.

*Inbred Line*—a relatively true-breeding strain resulting from at least five successive generations of controlled self-fertilization or of backcrossing to a recurrent parent with selection, or its equivalent for specific characteristics.

*Inert Matter*—all matter not seeds, including pieces of broken and damaged seeds one-half or less than the original size, sterile florets, fungus bodies, stones and all matter considered as inert by the Association of Official Seed Analysts Rules for Testing Seeds.

*Inseparable Seeds*—seeds that are similar in size, shape and weight to the seed offered for certification, which are difficult to remove.

*Isolation*—the distance required between a crop or variety entered for certification and other plantings of the same crop or variety, not entered for certification, which are pollinating at the same time.

*Kind*—one or more related species singly or collectively known by one common name (examples: corn, beans, wheat).

*Land Requirement*—the period of time during which a field entered for certification cannot have grown or been seeded to the same species or variety except a certified class of the same species or variety which was equal to or superior to that of the species or variety entered for certification. If a field(s) is(are) entered for certification in the foundation class, only the foundation class of seeds could have been grown in that field during the time period specified.

*Lot of Seed*—a definite quantity of seeds identified by a lot number or mark, every portion or bag of which is uniform, within permitted tolerances, relative to the factors which appear in the labeling.

*Noxious Weeds*—all weeds designated as "noxious weeds" under ' 109 of these regulations.

*Off-type (mutations)*—plants or seeds which deviate in one or more characteristics from the breeder description filed with the Department of Agriculture and Forestry.

*Open-pollination*—pollination that occurs naturally as opposed to controlled pollination such as by de-tasseling cytoplasmic male sterility, self-compatibility or similar processes.

*Originator*—a person, company, agent or institution developing a new variety of seed.

*Other Weeds/Weed Seeds* Call weeds and/or weed seeds which have not been designated as "noxious weeds" by the Seed Commission.

*Recertification* Cthe official approval of a second or subsequent generation of a certified class of seed.

*Roguing* Cthe removal from the field of noxious weeds, off-type plants, varietal mixtures and any other plants producing seeds which are inseparable from seeds of the crop to be certified.

*Species* Cplants designated by a common name and having common characteristics.

*Unit of Certification* Cany clearly defined field(s) or portion(s) of a field entered for certification.

*Variety* Ca subdivision of a kind, characterized by growth, plant, fruit, seed or other characteristics by which it can be differentiated from other seeds of the same kind.

*Volunteer Plants* Cplants of a crop kind or species other than the crop being certified that are present in a field.

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1431 and R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:564 (November 1982), repealed and readopted LR 12:825 (December 1986), amended LR 20:642 (June 1994).

## **' 127. General Requirements for Certification**

- A. The crop or variety to be certified must have been approved for certification by the Louisiana Department of Agriculture & Forestry. Also, the originator, developer, owner or agent shall provide the following to the Department of Agriculture & Forestry:
1. the name of the variety;
  2. a statement concerning the variety's origin and the breeding procedure used in its development;
  3. a detailed description of the morphological, physiological and other characteristics of the plants and seed that distinguish it from other varieties;
  4. evidence supporting the identity of the variety, such as comparative yield data, insect and disease resistance, or other factors supporting the identity of the variety;
  5. a statement delineating the geographic area or areas of adaptation of the variety;
  6. a statement on the plans and procedures for the maintenance of seed classes, including the number of generations through which the variety may be multiplied;
  7. a description of the manner in which the variety is constituted when a particular cycle of reproduction or multiplication is specified;
  8. any additional restrictions on the variety specified by the breeder, with respect to geographic area of seed production, age of stand or other factors affecting genetic purity;
  9. a sample of seed representative of the variety as marketed.
- B. To be certified, all crops and/or varieties must conform to (1) all general requirements for certification and (2) all specific requirements for certification of a particular crop or variety. (See ' ' 155C221 for specific requirements. In ' ' 155C221, the percentages shown for pure seed and germination are the minimum acceptable levels of performance required for certification; the percentages shown for all other factors are maximum allowable percentages.)
- C. The grower must submit the application described in ' 129 hereof on or before the date specified in ' 131 for the crop or variety to be certified. (See ' 129.B and ' 143.B for provisions concerning late applications.)
- D. The crop or variety to be certified must be of breeder, foundation or registered seed, or seed approved by the Seed Commission.

- E. The grower must maintain genetic purity during seeding, production, harvesting, storage, conditioning and labeling.
- F. The grower must hand-rogue all off-type plants, varietal mixtures, noxious weeds or any other plants producing seed that are inseparable from seed of the crop or variety to be certified.
- G. Other varieties or crops, volunteer plants and/or off-type plants cannot be present in the field, and seeds thereof cannot be present in seed to be certified, unless permitted under the specific certification standards for the crop or variety entered for certification. Noxious weeds are permitted in the field and seed thereof are permitted in seed to be certified, within the limitations specified in ' 145 hereof, unless a specific limitation on noxious weeds is contained in the specific requirements for the crop or variety entered for certification. (See ' ' 155C221 for specific requirements.)
- H. One or more field inspections will be made to determine genetic identity and purity. The crop or variety to be certified must be standing, reasonably free of weeds and of relatively uniform maturity at the time of field inspection(s). A copy of the field inspection report will be furnished to the grower.
- I. All planting, harvesting, bin storage and cleaning equipment must be free of contamination by other seeds, insects, or plant diseases.
- J. Storage facilities must be: (1) suitable for maintaining germination and varietal purity; (2) constructed so that a representative sample can be drawn; and (3) all such facilities are subject to approval by the Department of Agriculture & Forestry.
- K. The grower must maintain complete records accounting for all production and final disposition of all certified seeds.

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:565 (November 1982), amended LR 9:197 (April 1983), repealed and repromulgated LR 12:825 (December 1986), amended LR 20:642 (June 1994), LR 20:1257 (November 1994).

**' 129. Application for Field Certification**

- A. The grower must apply for certification on or before the application deadline shown in ' 131 for the crop or variety to be certified by completing the application form provided by the Department of Agriculture & Forestry.
- B. Applications for certification submitted after the deadline specified in ' 131 will not be accepted unless field inspection(s) can be completed prior to harvest.
- C. Information to accompany application:
  - 1. name of variety;
  - 2. copy of the purchase invoice, or statement showing class of seed purchased;
  - 3. one sample tag from each lot number (If the grower plants seed of his own production, the class of seed and lot number shall be identified by documentation acceptable to the Department of Agriculture and Forestry); and
  - 4. a map of each field presented for certification.
- D. It is the grower=s responsibility to notify the Department of Agriculture & Forestry when the crop or variety to be certified is ready for field inspection.

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433 and R.S. 1434.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:565 (November 1982), repealed and readopted LR 12:825 (December 1986).



**' 131. Application Deadlines**

- A. CornCa minimum of 30 days prior to pollination
- B. Onion bulbs and seed, and shallotsCMarch 1
- C. Clover (crimson, red, white), rescue grass, harding grass, vetch, and Irish potatoes)CApril 1
- D. Oats, wheat, ryegrass, singletary peasCApril 15
- E. Watermelon,, tissue culture sugarcaneCMay 1
- F. Sweet potatoes and sweet potato plants
  - 1. Greenhouse plantings (virus-tested) - 45 days prior to planting
  - 2. Field plantings - June 1
- G. OkraCJune 15
- H. CowpeasCa minimum of 30 days prior to harvest
- I. RiceCJuly 1
- J. Cotton, millet, sesame, sunflower, treeCJuly 15
- K. SoybeansCAugust 1
- L. Bermuda grasses
  - 1. New plantingsCminimum of 30 days prior to harvest
  - 2. Established stands (fields certified the previous year)CJune 1. Renewal application must be submitted.
- M. Turf and Pasture Grass
  - 1. New plantingsCat least 15 days prior to land preparation for planting
  - 2. Established stands (fields certified the previous year)CJune 1. Renewal application must be submitted
- N. Tomatoes (Spring)CJune 1, (Fall)CJuly 15

**AUTHORITY NOTE:** Promulgated in accordance with R.S. 3:1433.

**HISTORICAL NOTE:** Promulgated by the Department of Agriculture, Seed Commission, LR 8:565 (November 1982), amended LR 9:195 (April 1983), repealed and readopted by the Department of Agriculture & Forestry, Seed Commission, LR 12:825 (December 1986), amended LR 13:155 (March 1987), LR 12:232 (April 1987), LR 14:603 (September 1988), LR 23:1283 (October 1997), LR 25:1616 (September 1999).

### **' 133. Limitations on Generations**

- A. The originator of the variety may specify the number of generations through which a variety may be multiplied.
- B. No variety may be multiplied more than two generations beyond the foundation class, except as follows:
  - 1. Older varieties of certified seed may be re-certified when foundation seed is not being maintained.
  - 2. One additional generation of certified seed may be permitted on a one-year basis when, prior to planting season, the Seed Commission declares that there are insufficient supplies of foundation and registered seed to plant the needed acreage of the certified variety. Permission of the variety's originator, if existent, must be obtained. In this situation, the additional generation will not be eligible for re-certification.

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, L.R. 8:565 (November 1982), repealed and readopted LR 12:825 (December 1986).

### **' 135. Lot of Seed**

- A. The applicant shall assign a specific, unique number or other mark when the seed is conditioned and bagged.
- B. Each container in a given lot of seed shall be marked with the number or other mark assigned to that lot.
- C. Seed lots may be blended if the variety and class are the same.
- D. All seed must be bagged in new bags, unless other types of containers are approved by the Department of Agriculture & Forestry prior to bagging.

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1431 and R.S. 3:1433

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:565 (November 1982), amended LR 9:195 (April 1983), repealed and readopted LR 12:825 (December 1986).

## **' 137. Seed Sampling**

- A. Seed sampling will be performed at the request of the grower.
- B. Except as provided by ' 137.D.2, official samples to determine eligibility for certification shall be drawn only after the seed is conditioned.
- C. Sampling of Bagged Seed
  - 1. Each lot of seed must be stacked so as to facilitate sampling.
  - 2. A Department of Agriculture & Forestry inspector will sample at random, by probing, a specific number of bags from each lot. The number of bags to be sampled from each lot is as follows: five bags, plus 10 percent of the total number, not to exceed 30 bags per lot. In lots containing six bags or less, every bag will be sampled.
- D. Sampling of Bulk Seed
  - 1. Cleaned Seed in Bulk.
    - a. A Department of Agriculture & Forestry inspector will collect a minimum of four samples, at intervals of four feet, by probing the entire depth of the bin or storage area. All samples will be blended into one representative sample for each bin or storage area.
  - 2. Uncleaned Seed in Bulk
    - a. A Department of Agriculture & Forestry inspector will collect a minimum of four samples, at intervals of four feet, by probing the entire depth of the bin or storage area. All samples will be blended into one representative sample for each bin or storage area. The initial sample will be done only for purposes of determining moisture content and germination. Results of the germination test will be invalid after 60 days in the absence of a second sample.
    - b. A second representative sample will be drawn within 60 days after the first sample, after conditioning, for determining purity.
- E. Analysis of samples shall be performed according to the current rules of the Association of Official Seed Analysts.

## F. Re-sampling Policy

1. Except in special instances, as described below, only one sample shall be obtained from each certified lot:
  - a. When a certified seed lot fails certification requirements due to physical or mechanical purity factors, such as excess inert matter or weed seed, the seed may be reconditioned if the contaminants are separable. A complete purity analysis and germination test will be required on the reconditioned lot of seed. Certified seed rice which fails certification due to the presence of red rice seed in the sample shall be subject to the terms of Subparagraph e below.
  - b. Should a seed lot fail certified seed germination standards on the first laboratory test, a re-sample for germination test only for that seed lot will be permitted. Only one re-sample per seed lot will be permitted.
  - c. Whenever a certified seed lot is divided into sub-lots, both a purity and a germination test will be required for all sub-lots.
  - d. The last and most recent laboratory test report for a seed lot shall be the final analysis used to establish the eligibility for certification and will determine the information to be placed on the tag.
  - e. When a certified seed rice lot fails certification requirements due to the presence of one red rice seed in the original four pound sample, then a second eight pound sample may be drawn from the lot. If one or more red rice seeds are found in the second sample, the lot will be disqualified on the basis of red rice content. If no red rice seed is found in the second sample, the lot would meet certification requirements. Certified seed rice whose original sample contains the presence of more than one red rice seed may not be re-sampled.
2. A fee of \$30 will be charged for each re-sample, which fee shall be due and payable when the request for re-sample is initially made.

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433 and R.S. 3:1434.

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### **' 139. Listing of Certified Seed Conditioning Plants**

- A. Seed conditioning plants desiring to be listed in the Department of Agriculture & Forestry's roster of seed conditioning plants must make a written application for inclusion on the list.
- B. The Department of Agriculture & Forestry will issue certificates to all seed conditioning plants making application for inclusion on the listing, on an annual basis, each such certificate to expire on June 30 following date of issue.
- C. The following requirements must be met by processors of all classes of certified seed.
  - 1. Facilities shall be available to perform processing without introducing admixtures.
  - 2. Identity of the seed must be maintained at all times.
  - 3. Records of all operations relating to certification shall be completed and adequate to account for all incoming seed and final disposition of seed.
  - 4. Processors shall permit inspection by the certifying agency of all records pertaining to all classes of certified seed.
  - 5. Processors shall designate an individual who shall be responsible to the certifying agency for performing such duties as may be required by the certifying agency.
  - 6. Seed lots of the same variety and class may be blended and the class retained. If lots of different classes are blended, the lowest class shall be applied to the resultant blend. Such blending can only be done when authorized by the certifying agency.

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433 and R.S. 3:1434.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:565 (November 1982), amended LR 9:197 (April 1983), repealed and repromulgated LR 12:825 (December 1986), amended LR 20:642 (June 1994).

#### **' 141. Tagging**

- A. Each container of all classes of certified seed offered for sale must have an official Department of Agriculture & Forestry tag attached.
- B. The lot number of the tag attached to each container must be the same as the lot number marked on the container.
- C. The tag shall contain the following information:
  - 1. kind and variety;
  - 2. where grown;
  - 3. percentage of pure seed, crop seed, weed seed and inert matter;
  - 4. name and number of noxious weed seeds per pound;
  - 5. grower's name and address or code number;
  - 6. germination percentage;
  - 7. hard seed;
  - 8. total germination and hard seed percentage;
  - 9. net weight;
  - 10. lot number; and
  - 11. date of test.
- D. Tags will be issued only for seed proven by laboratory analysis to meet required germination and purity standards.
- E. The number of tags issued will be determined by the inspector's estimate of the quantity of seed at the time of sampling. All unused tags must be returned to the Department of Agriculture & Forestry.
- F. Pretagging.

In order to permit seedsmen to bag and label seed in advance of final laboratory reports, certification tags may be issued in advance. Such labels can be pre-issued upon receipt of completed field inspection reports showing that field production standards have been met. The state may grant a waiver on the movement of seed if an acceptable preliminary test is made on the seed lot. If pretagged lots fail laboratory analysis standards, all tags shall be destroyed or returned to the Louisiana Department of Agriculture & Forestry. Failure to comply with this regulation will result in suspension of future pre-tag privileges.

- G. The official certification label may be printed directly on the container with prior approval of the Department of Agriculture & Forestry.
- H. Labels other than those printed on the containers shall be attached to containers in a manner that prevents removal and reattachment without tampering being obvious.

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433 and R.S. 3:1434.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:566 (November 1982), amended LR 9:196 (April 1983), repealed and repromulgated LR 12:825 (December 1986), amended LR 20: 643 (June 1994).

## **'143. Fees**

- A. The application fee for certification shall be \$23 for each crop, one variety per application, plus \$.90 per acre inspection fee for all crops except sweet potatoes and sugar cane which shall be \$1.80 per acre and Turf and Pasture Grass which shall be \$25 per acre. The application fee shall be due and payable upon filing of the application for certification.
- B. The fee for certification on any application submitted after the deadline shown in '131 shall be \$100.
- C. A fee of \$50 shall be charged for each re-inspection of a field.
- D. Fees for issuance of certified seed tags shall be sixteen cents per tag for the following classes of seed:
  - 1. breeder (white tag)
  - 2. foundation (white tag)
  - 3. registered (purple tag)
  - 4. certified (blue tag)
  - 5. selected tree seed (green tag); and
  - 6. source identified tree seed (yellow tag)
- E. Fees for Sweet Potatoes
  - 1. The fee for greenhouse inspections of virus-tested sweet potato plants and mini-roots shall be \$50 per crop year.
  - 2. A fee of five cents per 1,000 plants will be collected for each 1,000 sweet potato plants inspected for certification purposes.
- F. Fees for Bulk Seed Certification

The fee for issuance of a bulk certified seed sales certificate shall be sixteen cents per hundred-weight.
- G. Fees for Phytosanitary Inspection

A fee of \$.50 per acre shall be charged for phytosanitary inspections.

The application fee for phytosanitary inspection shall be due and payable upon filing of the application for certification.



#### H. Fees for Re-sampling Certified Seed

A fee of \$30 will be charged for each re-sample, which fee shall be due and payable when the request for re-sample is initially made.

#### I. Fees for Bulk Sampling

A fee of \$30 shall be charged for each bulk sample by vacuum probe, which shall be due and payable when request for bulk sample is initially made.

**AUTHORITY NOTE:** Promulgated in accordance with R.S. 3:1433.

**HISTORICAL NOTE:** Promulgated by the Department of Agriculture, Seed Commission, LR 8:566 (November 1982), amended LR 10:495 (July, 1984); repealed and readopted by the Department of Agriculture & Forestry, Seed Commission LR 12:825 (December 1986), amended LR 14:604 (September 1988), amended LR 16:847 (October 1990), LR 26:235 (February 2000).

## 145. Noxious Weeds

- A. The following weeds, together with the specific limitation shown for each weed, are designated as noxious weeds:

### **LIMITATIONS on WEED SEED in CERTIFIED SEED (by pounds)**

1. Tropical Soda Apple ( <i>Solanum viarum</i> ).....	Prohibited
2. Field Bindweed ( <i>Convolvulus arvensis</i> ).....	Prohibited
3. Hedge Bindweed ( <i>Convolvulus sepium</i> ).....	Prohibited
4. Nutgrass ( <i>Cyperus esculentus</i> , <i>C. rotundus</i> ).....	Prohibited
5. Itchgrass ( <i>Rottboellia exaltata</i> L., <i>R. cochinchinensis</i> ).....	Prohibited
6. Balloonvine ( <i>Cardiospermum halicacabum</i> ).....	Prohibited
7. Cocklebur ( <i>Xanthium</i> spp).....	5 per lb.
8. Spearhead ( <i>Rhynchospora</i> spp).....	5 per lb.
9. Purple Moonflower ( <i>Ipomoea turbinate</i> ).....	9 per lb.
10. Red Rice ( <i>Oryza sativa</i> var).....	9 per lb.
11. Wild Onion and/or Wild Garlic ( <i>Allium</i> spp).....	9 per lb.
12. Canada Thistle ( <i>Cirsium arvense</i> ).....	100 per lb.
13. Dodder ( <i>Cuscuta</i> spp).....	100 per lb.
14. Johnsongrass ( <i>Sorghum halepense</i> ).....	100 per lb.
15. Quackgrass ( <i>Agropyron repens</i> ).....	100 per lb.
16. Russian Knapweed ( <i>Centaurea repens</i> ).....	100 per lb.
17. Blueweed, Texas ( <i>Helianthus ciliari</i> ).....	200 per lb.
18. Bermuda Grass ( <i>Cynodon dactylon</i> ).....	300 per lb.
19. Bracted Plantain ( <i>Plantago aristata</i> ).....	300 per lb.

20. Buckhorn Plantain	
( <i>Plantago lanceolata</i> ).....	300 per lb.
21. Cheat	
( <i>Bromus secalinus</i> ).....	300 per lb.
22. Hairy Chess	
( <i>Bromus commutatus</i> ).....	300 per lb.
23. Corncockle	
( <i>Agrostemma githago</i> ).....	300 per lb.
24. Darnel	
( <i>Lolium temulentum</i> ).....	300 per lb.
25. Dock	
( <i>Rumex</i> spp).....	300 per lb.
26. Horsenettle	
( <i>Solanum carolinense</i> ).....	300 per lb.
27. Purple Nightshade	
( <i>Solanum elaeagnifolium</i> ).....	300 per lb.
28. Sheep Sorrel	
( <i>Rumex acetosella</i> ).....	300 per lb.
29. Morning Glory	
( <i>Ipomoea</i> spp).....	18 per lb.
30. Wild Poinsettia	
( <i>Euphorbia heterophylla</i> , <i>E. dentate</i> ).....	18 per lb.
31. Wild Mustard and Wild Turnips	
( <i>Brassica</i> spp).....	300 per lb.
32. Hemp Sesbania, Coffee Bean, Tall Indigo	
( <i>Sesbania exaltata</i> ).....	300 per lb.
33. Curly Indigo	
( <i>Aeschynomene virginica</i> ).....	300 per lb.
34. Mexican Weed	
( <i>Caperonia castaneaefolia</i> ).....	300 per lb.
Sum of total noxious weed seed	
(subject to limitation above).....	500 per lb.

B. Noxious weed seeds are permitted in seed to be certified, within the limitations specified in ' 145.A, unless prohibited or otherwise limited under the specific rules for the crop or variety entered for certification. (See ' ' 155C221 for limitations on each noxious weed for each crop or variety.)

C. Limitations on noxious weeds (in the field or in seed to be certified), may be more restrictive for a particular crop or variety to be certified than the limitations shown in ' 145.A above. The limitation on noxious weeds stated in ' ' 155C221 shall supersede the limitations shown in ' 145.A whenever a more restrictive limitation is stated in the specific requirements for the crop or variety.

**AUTHORITY NOTE:** Promulgated in accordance with R.S. 3:1431 and R.S. 3:1433.

**HISTORICAL NOTE:** Promulgated by the Department of Agriculture, Seed Commission, LR 8:566 (November 1982), amended LR 9:197 (April 1983), repealed and readopted LR 12:825 (December 1986), amended LR 14:605 (September 1988), LR 23:1283 (October 1997).

**' 147. Bulk Certification Requirements**

**A. Limitations**

1. Bulk certification shall be limited to the certified class of the following commodities:
  - a. Small grains (wheat and oats)
  - b. Rice
2. Seed eligible for bulk certification shall meet all field and laboratory standards established for certified seed as specified in these regulations.
3. Seed certified in bulk shall not be eligible for re-certification.
4. Seed certified in bulk shall only be sold by the applicant producer or by an approved retail facility. Each retail outlet must have an acceptable procedure for handling bulk certified seed to assure genetic purity and identity are maintained.

**B. Application for Bulk Certification**

The seed owner is responsible for making application for bulk certification and for securing prior approval of the Department of Agriculture & Forestry for the facility in which the seed will be stored.

**C. Storage Requirements**

1. A separate storage bin must be available for each variety that will be sold in bulk.
2. Storage bins must be constructed so that all bin openings can be sealed to prevent contamination and maintain genetic purity.
3. All bins must be clearly and prominently marked to show crop and variety, until disposal of the entire lot.

**D. Sampling of Seed to be Certified in Bulk.**

Seed sampling shall be conducted as provided in ' 137.D, except that, at the option of the applicant, the sample to determine germination is drawn.

**E. Certification**

1. No certified seed tags will be issued for seed certified in bulk, except as provided by ' 147.F.
2. For sales to an approved retail facility within the state, a Bulk Certified Seed Transfer Form will be issued to cover all bulk certified seed which meets the general requirements for seed certification and the specific requirements for the crop/variety being certified.

- a. The seller shall provide a copy of the Bulk Certified Seed Transfer Form to each purchaser at time of delivery.
  - b. The seller shall provide a copy of each issued Bulk Certified Seed Transfer Form to the Department of Agriculture & Forestry.
  - c. The seller shall maintain a copy of each issued Bulk Certified Seed Transfer Form in his file, which shall be available for examination by the Department of Agriculture & Forestry upon reasonable request.
3. For sales to its final disposition, a Bulk Certified Seed Sales Certificate will be issued to cover all bulk certified seed which meets the general requirements for seed certification and the requirements for the crop/variety being certified.
    - a. The seller shall provide a copy of the Bulk Certified Seed Sales Certificate to each purchaser at the time of delivery.
    - b. The seller shall provide a copy of each issued Bulk Certified Seed Sales Certificate to the Department of Agriculture & Forestry.
    - c. The seller shall maintain a copy of each issued Bulk Certified Seed Sales Certificate in his file, which shall be available for examination by the Department of Agriculture & Forestry upon reasonable request.

F. Subsequent Packaging of Seed Certified in Bulk

1. If the owner of seed certified in bulk later elects to package any remaining portion of the lot, the owner must give prior notification of his intention to package the seed to the Department of Agriculture & Forestry.

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433 and R.S. 3:1434.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:566 (November 1982), repealed and readopted LR 12:825 (December 1986), amended LR 23:1283 (October 1997), LR 26:235 (February 2000).

**' 149. Interagency Certification (Out-of-State Seed)**

- A. Seed to be certified by interagency action must meet the Louisiana Seed Certification Standards or comparable standards of a seed certifying agency recognized by the Louisiana Commissioner of Agriculture & Forestry.
- B. Seed to be certified by interagency action must contain, on the package, evidence from another recognized certifying agency that the seed is eligible for certification.
- C. The following information must accompany each lot of seed:
  - 1. kind and variety;
  - 2. quantity (pounds);
  - 3. class; and
  - 4. lot number issued by previous certifying agency.
- D. Seed to be certified by interagency action must be sequentially numbered.
- E. A Louisiana tag for the appropriate class of seed must be attached to all seed to be certified by interagency action.

**AUTHORITY NOTE:** Promulgated in accordance with R.S. 3:1433.

**HISTORICAL NOTE:** Promulgated by the Department of Agriculture, Seed Commission, LR 8:566 (November 1982), amended LR 9:196 (April 1983), repealed and readopted LR 12:825 (December 1986), amended LR 23:1283 (October 1997),.

## **' 151. Violations**

- A. Any of the following acts shall be considered as violations:
1. Failure to comply with the requirements of the Seed Law (R.S. 3:1431C3:1447) or these rules and regulations.
  2. Any sale or offer for sale of any agricultural seeds that are not properly labeled in accordance with the rules and regulations of the Seed Commission.
  3. Any attempt to mislead or defraud by altering, erasing, destroying, forging, disfiguring, reusing, or substituting in any manner any labels, tags, tape, or certificates which pertain to quality, quantity, or condition of agricultural seeds. This prohibition applies for labels, tags, tape or certificates issued by any duly constituted seed certifying agency.
  4. Any damage or breaking of official seals on containers of certified seeds.
  5. Failure to keep accurate records and maintain lot identity.
  6. Adding any seed of any kind, whether certified or not, to any lot of certified seed (except as permitted under ' 135.D).
- B. Each day on which any of the activities listed above occurs shall be considered a separate offense.

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1444 and R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:567 (November 1982), amended LR 9:197 (April 1983), repealed and readopted LR 12:825 (December 1986).

**' 153. Penalties; Adjudicatory Hearing Required**

- A. Whenever the chairman of the Seed Commission has reason to believe that there has been a violation of the Seed Law or any of these rules and regulations, he shall notify the person believed to have committed the violation, the notice to be in accordance with the requirements of the Administrative Procedure Act.
- B. No penalty shall be imposed on any individual, firm, corporation or other legal entity regulated under the Seed Law until such time as an adjudicatory hearing is conducted, such hearing to be conducted in accordance with the requirements of the Administrative Procedure Act.
- C. Whenever the Seed Commission determines that a violation has occurred, the Seed Commission may impose any of the following penalties:
  - 1. withdraw from the offender the right to have seed certified under these procedures;
  - 2. destroy any seed which is not in compliance with the requirements of the Seed Law or the requirements of these regulations; or
  - 3. impose a penalty not to exceed \$500 for each offense.

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1446 and R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:567 (November 1982), amended LR 9:197 (April 1983), repealed and readopted 12:825 (December 1986).



## Subchapter C. Certification of Specific Crops/Varieties

### ' 155. Bahia Grass Seed Certification Standards

#### A. Field Standards

Factor	Foundation	Registered	Certified
Land Requirement	5 yrs.	1 yr.	1 yr.
Isolation	1,320 ft.	660 ft.	330 ft.
Other Varieties	None	None	5 plants per acre
Other Grass with Inseparable Seed	10 plants per acre	10 plants per acre	25 plants per acre
Other Crops	Other crops with seed that can be separated will be permitted in the field		

#### B. Seed Standards

Factor	Foundation	Registered	Certified
Pure Seed	98.00%	98.00%	98.00%
Inert Matter	2.00%	2.00%	2.00%
Other Varieties	0.10%	0.10%	0.25%
Noxious Weeds	None	None	None
Other Weeds	0.50%	0.50%	1.00%
Germination	80.00%	80.00%	80.00%

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:568 (November 1982), amended LR 9:197 (April 1983), repealed and readopted LR 12:825 (December 1986).

**'157. Bermuda and Zoysia Grass Seed Certification Standards**

**A. Field Standards**

<b>Factor</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Land Requirement	5 yrs.	1 yr.	1 yr.
Isolation	33 ft.	33 ft.	33 ft.
Other Varieties* (per 1,000 plants)	None	1 plant	3 plants
Noxious Weeds: Johnsongrass, Cheat and Nutgrass	None	None	None
*Including all other Bermuda and Zoysia grass that can be differentiated from the variety to be certified			

**B. Planting Stock Standards**

<b>Factor</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Pure Live Sprigs containing roots (minimum by count)	90.00%	90.00%	90.00%
Other Living Plants (maximum by count)	2.00%	2.00%	2.00%
Noxious Weeds: Johnsongrass, Cheat and Nutgrass	None	None	None

C. Seed Standards

Factor	Breeder	Foundation	Registered	Certified
Pure Seed	None	98.00%	98.00%	98.00%
Inert Matter	None	2.00%	2.00%	2.00%
Other Crops	None	0.01%	0.01%	0.25%
Noxious Weeds	None	None	None	None
Other Weeds	None	0.01%	0.01%	0.05%
Germination	None	85.00%	85.00%	85.00%

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:568 (November 1982), amended LR 9:197 (April 1983), repealed and readopted LR 12:825 (December 1986). ' 159.

## ' 159 Crimson Clover Seed Certification Standards

### A. Field Standards

Factor	Breeder	Foundation	Registered	Certified
Land Requirement	5 yrs.	5 yrs.	3 yrs.	2 yrs.
Isolation	1,000 ft.	1,000 ft.	1,000 ft.	600 ft.
Other Varieties	None	None	0.20%	0.50%
Noxious Weeds	None	None	None	None

### B. Seed Standards

Factor	Breeder	Foundation	Registered	Certified
Pure Seed	98.00%	98.00%	98.00%	98.00%
Inert Matter	2.00%	2.00%	2.00%	2.00%
Other Varieties	None	0.10%	0.25%	1.00%
Other Crops	None	None	45 seed/lb.	90 seed/lb.
Noxious Weeds	None	None	None	None
Other Weeds	25 seed/lb.	50 seed/lb.	180 seed/lb.	360 seed/lb.
Germination	None	85.00%	85.00%	85.00%

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:568 (November 1982), amended LR 9:197 (April 1983), repealed and readopted LR 12:825 (December 1986).

**' 161. Louisiana White, Louisiana White S 1, Ladino and Other White Clover Seed Certification Standards**

**A. Field Standards**

<b>Factor</b>	<b>Breeder</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Land Requirement	5 yrs. <sup>1</sup>	5 yrs. <sup>1</sup>	3 yrs. <sup>1</sup>	2 yrs. <sup>2</sup>
Isolation	1,320 ft.	1,320 ft.	660 ft.	330 ft.
Other Varieties and/or Species that can be differentiated from the variety being certified	None	None	None	None
Other Crops (inseparable)	10 plants per acre	10 plants per acre	50 plants per acre	100 plants per acre
<sup>1</sup> A foundation and/or registered field may produce only two successive seed crops following seeding except that each may be reclassified to the next lower class after being harvested for seed for two years. A stand will not be eligible to produce any class of seed after four successive seed crops.  <sup>2</sup> A certified field on which a stand of perennial plants is maintained may produce a maximum of four successive seed crops following seeding.				

B. Seed Standards

Factor	Breeder	Foundation	Registered	Certified
Pure Seed	99.00%	98.00%	98.00%	98.00%
Inert Matter	1.00%	2.00%	2.00%	2.00%
Other Crops	None	None	45 seed/lb.	100 seed/lb.
Other Varieties	None	None	None	10 seed/lb.
Other Kinds	None	None	45 seed/lb.	90 seed/lb.
Sweet Clover	None	None	45 seed/lb.	80 seed/lb.
Other Clovers	None	None	None	None
Noxious Weeds: Bracted plantain Buckhorn plantain	None	None	None	None
Other weeds	0.04%	0.04%	0.07%	0.14%
Wild carrot	None	None	None	None
Germination	None	85.00%	85.00%	85.00%

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:568 (November 1982), amended LR 9:197 (April 1983), repealed and readopted LR 12:825 (December 1986).

' 163. **Red Clover Seed Certification Standards**

A. Field Standards

Factor	Foundation	Registered	Certified
Land Requirement*	5 yrs.	3 yrs.	2 yrs.
Isolation	1,320 ft.	660 ft.	330 ft.
Other Varieties	None	0.20%	0.50%
*No stand of red clover will be eligible to produce any class of certified seed after two successive seed crops. These seed crops may be produced in the same or consecutive years.			

B. Seed Standards

Factor	Breeder	Foundation	Registered	Certified
Pure Seed	99.00%	99.00%	99.00%	99.00%
Inert Matter	1.00%	1.00%	1.00%	1.00%
Other Varieties	None	0.10%	0.25%	1.00%
Other Crops	None	18 seed/lb.	90 seed/lb.	180 seed/lb.
Noxious weeds: Dock, Cheat, Darnel Johnsongrass & Wild Mustard	None	45 seed/lb.	90 seed/lb.	100 seed/ lb.
Dodder	None	None	None	None
Other Weeds	0.05%	0.15%	0.15%	0.25%
Germination	None	85.00%	85.00%	85.00%

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:568 (November 1982), amended LR 9:197 (April 1983), repealed and readopted LR 12:825 (December 1986).

' 165. **Cottonseed Seed Certification Standards**

A. Field Standards

<b>Factor</b>	<b>Breeder</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Isolation* *		15 ft.	15 ft.	15 ft.
Other Varieties & Off-type Plants	None	None	1 plant per acre	5 plants per acre
Noxious Weeds: Cocklebur	None	5 plants per acre	8 plants per acre	10 plants per acre

\* \* Fields entered for certification must be isolated at least 600 feet from Sea Island cotton, red leaf cotton, or other cottons which vary greatly in plant characteristics from the variety entered for certification, and at least one-half mile from G. barbadense and interspecific hybrids involving G. barbadense.

B. Handling and Storage Requirements

1. Ginning.

Cottonseed entered in all classes of certification shall be ginned on a thoroughly cleaned, one-variety gin approved by the Department of Agriculture and Forestry prior to ginning seed to be certified. With special permission of the Department of Agriculture & Forestry,

- a. cottonseed for all classes of certification may be ginned on thoroughly cleaned, mixed variety gins either with a notarized ginner's agreement provided by the Louisiana Department of Agriculture and Forestry or an inspector of the Louisiana Department of Agriculture & Forestry shall be present if cottonseed for certification is ginned.
- b. cottonseed produced for only the certified class may be ginned on a mixed-variety gin if a minimum of three bales are "blown" through the gin prior to catching of the cottonseed to be certified. An inspector of the Louisiana Department of Agriculture & Forestry may be present if cottonseed for certification is ginned under special permission.



## 2. Delinting.

Delinters must conform to the same requirements set forth for ginnerers. No cottonseed entered for certification may be delinted outside the state of Louisiana except by special permission of the Department of Agriculture & Forestry.

### C. Seed Standards

<b>Factor</b>	<b>Breeder</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Pure Seed	99.00%	99.00%	99.00%	99.00%
Inert Matter	1.00%	1.00%	1.00%	1.00%
Other varieties	None	0.03%	0.05%	0.10%
Other Crops	None	None	3 seed/lb.	5 seed/lb.
Noxious Weeds: Cocklebur	None	None	1 seed/2 lbs.	1 seed/2 lbs.
Germination	None	70.00%	70.00%	70.00%

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture & Forestry, LR 8:570 (November 1982) amended LR 9:199 (April 1983), LR 10:737 (October 1984), repealed and repromulgated LR 12:825 (December 1986), amended LR 13:156 (March 1987), LR 13:232 (April 1987), LR 18:624 (June 1992), LR 18:954 (September 1992)

'167. **Dallis Grass Seed Certification Standards**

A. Field Standards

<b>Factor</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Land Requirement	5 yrs	3 yrs	3 yrs
Isolation	60 ft.	50 ft.	50 ft.
Other Crops	10 plants per acre	10 plants per acre	100 plants per acre

B. Seed Standards

<b>Factor</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Pure Seed	40.00%	40.00%	40.00%
Inert Matter	60.00%	60.00%	60.00%
Other Varieties	0.10%	1.00%	2.00%
Other Crops	None	None	10 seed/lb.
Noxious Weeds	None	None	None
Germination	50.00%	50.00%	50.00%

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture & Forestry, LR 8:570 (November 1982) amended LR 9:199 (April 1983), LR 10:737 (October 1984), repealed and repromulgated LR 12:825 (December 1986).

' 169. **Annual Ryegress Seed Certification Standards**

A. Field Standards

<b>Factor</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Land Requirement	5 yrs	1 yr.	1 yr.
Isolation	900 ft.	900 ft.	350 ft.
Other Varieties	None	1.00%	2.00%
Other Crops	0.10%	0.20%	0.30%

B. Seed Standards

<b>Factor</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Pure Seed	97.00%	97.00%	96.00%
Inert Matter	3.00%	3.00%	4.00%
Other Varieties	0.10%	1.00%	2.00%
Other Crops	0.10%	0.25%	0.25%
Noxious Weeds	None	None	None
Other Weeds	0.25%	0.25%	0.25%
Germination	85.00%	85.00%	85.00%

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture & Forestry, LR 8:570 (November 1982) amended LR 9:199 (April 1983), LR 10:737 (October 1984), repealed and repromulgated LR 12:825 (December 1986).

**' 171. Harding Grass Seed Certification Standards**

**A. Field Standards**

<b>Factor</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Land Requirement	5 yrs.	1 yr.	1 yr.
Other Varieties	None	1.00%	2.00%
Isolation	60 ft.	30 ft.	15 ft.

**B. Seed Standards**

<b>Factor</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Pure Seed	99.00%	97.00%	95.00%
Inert Matter	1.00%	3.00%	5.00%
Other Varieties	0.10%	1.00%	2.00%
Other Crops	1.00%	1.00%	1.00%
Other Grasses	0.10%	0.10%	0.25%
Noxious Weeds	None	None	None
Germination	70.00%	70.00%	70.00%

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture & Forestry, LR 8:570 (November 1982) amended LR 9:199 (April 1983), LR 10:737 (October 1984), repealed and repromulgated LR 12:825 (December 1986).

**' 173. Hybrid Seed Corn Certification Standards**

**A. Eligibility Requirements.** Hybrid corn may be one of the following:

1. *Single Cross*—the first generation hybrid between two inbred lines.
2. *Double Cross*—the first generation hybrid between two single crosses.
3. *Three-way Cross*—a first generation hybrid between a single cross and an inbred line.
4. *Top Cross*—the first generation hybrid of a cross between an inbred line and an open-pollinated variety or the first generation hybrid between a single cross and an open-pollinated variety.
5. *Foundation Single Cross*—a single cross used in the production of a double cross, a three-way, or a top cross.

**B. Field Inspection**

1. Seed fields shall be inspected at least once prior to the pollination period for purity as to plant type. Any off-type or doubtful plants must be destroyed before they shed pollen.
2. At least three field inspections shall be made during the pollinating period, said inspections to be made without previous notification to the grower.

**C. Field Standards**

**1. Unit of Certification**

The entire acreage of any one specific commercial hybrid must be entered for certification.

**2. Isolation Requirements**

Fields in which commercial hybrid corn is being produced must be so located that the female parent is not less than 660 feet in all directions from other corn of a different kernel color or type (sweet, pop, flint, white, red, etc.)

**3. Border Rows**

When the kernel type and color of the corn in the contaminating field are the same as those of the parent in the crossing field, the isolation distance may be modified by the planting of border rows of the pollen parent.

The following table indicates the minimum number of border rows required for fields of various sizes when located at different distances from other corn:

#### FIELD SIZE

Minimum Distance from other corn Feet	1 to 20 acres (Minimum)	20 acres or more border rows
410	0	0
370	2	1
330	4	2
290	6	3
245	8	4
205	10	5
165	12	6
125	14	7
85	16	8
0	-	10

The above isolation requirements do not apply to crossing fields when the same male or pollen parent is used in each. In such cases the two fields must be clearly divided by use of an area not less than 14 feet or a natural boundary which is permanent and distinctive (e.g., ditch, road, headland, etc.).

#### 4. Detasseling

- a. A commercial hybrid will be disqualified for certification when five percent or more of the female seed parent plants have receptive silk.
  - i. if more than one percent of the female seed parent plants have shed pollen on one inspection; or
  - ii. if a total of two percent of the female seed parent plants have shed pollen on three inspections.
- b. Sucker tassels, portions of tassels or tassels on main plants will be counted as shedding pollen when two inches or more of the central stem, the side branches, or a combination of the two have anthers extended from the glumes. In cases where a few silks are out and tassels of the seed parent have begun to shed pollen, the field can be approved by immediate and complete detasseling of the seed parent and removal of the ear shoots with exposed silks, if done to the satisfaction of the Department of Agriculture & Forestry.

#### D. Seed Standards

Factor	Certified Class
Pure Seed	98.00%
Inert Matter	2.00%
Other Varieties	0.50%
Noxious and Other Weeds	None
Off-color, Off-type Kernels	0.10%
Germination	90.00%

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:572 (November 1982), amended LR 9:197 (April 1983), repealed and repromulgated LR 12:825 (December 1986), amended LR 13:156 (March 1987), LR 13:232 (April 1987), LR 15:613 (August 1989), LR 20:643 (June 1994).

**'175. Seed Corn (Open-Pollinated) Seed Certification Standards**

**A. Field Standards**

<b>Factor</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
*Isolation	1,200 ft.	1,200 ft.	1,200 ft.
Other Varieties	None	None	0.50%
Off-type Plants	0.20%	0.20%	0.50%
*Does not apply to other corn with different maturity dates.			

**B. Seed Standards**

<b>Factor</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Pure Seed	98.00%	98.00%	98.00%
Inert Matter	2.00%	2.00%	2.00%
Other Crops	None	None	5 seed/lb.
Other Varieties	None	None	3 seed/lb.
Noxious and Other Weeds	None	None	None
Germination	80.00%	80.00%	80.00%

**AUTHORITY NOTE:** Promulgated in accordance with R.S. 3:1433.

**HISTORICAL NOTE:** Promulgated by the Department of Agriculture, Seed Commission, LR 8:572 (November 1982), amended LR 9:197 (April 1983), repealed and repromulgated LR 12:825 (December 1986), amended LR 23:1284 (October 1997).



## 177. Millet Seed Certification Standards

### A. Field Standards

Factor	Foundation	Registered	Certified
Land Requirement	1 yr.	1 yr.	1 yr.
Isolation	1,320 ft.	1,320 ft.	825 ft.
Other Varieties	None	1 plant per acre	10 plants per acre

### B. Seed Standards

Factor	Foundation	Registered	Certified
Pure Seed	98.00%	98.00%	98.00%
Inert Matter	2.00%	2.00%	2.00%
Other Crops	None	None	None
Other Varieties	None	5 seed/lb.	10 seed/lb.
Noxious Weeds	None	None	None
Other Weeds	5 seed/lb.	5 seed/lb.	5 seed/lb.
Germination	75.00%	75.00%	75.00%

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:572 (November 1982), amended LR 9:197 (April 1983), repealed and repromulgated LR 12:825 (December 1986), amended LR 23:1284 (October 1997).

## ' 179. Okra Seed Certification Standards

### A. Field Standards

Factor	Foundation	Registered	Certified
*Land Requirement	1 yr.	1 yr.	1 yr.
Isolation	1,320 ft.	1,320 ft.	825 ft.
Other Varieties	None	None	1 per 1,250 plants
Off-type Plants	None	1.25%	1.25%
*Requirement can be waived if previous crop was grown from certified seed of the same variety			

### B. Seed Standards

Factor	Foundation	Registered	Certified
Pure Seed	98.00%	98.00%	98.00%
Inert Matter	2.00%	2.00%	2.00%
Other Varieties	None	None	None
Other Crops	None	5 seed/lb.	10 seed/lb.
Noxious Weeds	None	None	None
Other Weeds	5 seed/lb.	5 seed/lb.	5 seed/lb.
Germination	75.00%	75.00%	75.00%

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:572 (November 1982), amended LR 9:197 (April 1983), repealed and repromulgated LR 12:825 (December 1986), amended LR 15:613 (August 1989).

## 181. Onion Bulb Seed Certification Standards

### A. Field Standards

Factor	Foundation	Registered	Certified
Land Requirement	1 yr.	1 yr.	1 yr.
Isolation	5,280 ft.	2,640 ft.	1,320 ft.
Varietal Mixtures and Off-type Plants	.50%	.50%	.50%
Diseases:			
Onion Mosaic	1.00%	1.00%	1.00%
Pink Root	10.00%	10.00%	10.00%
Onion Smut	2.00%	2.00%	2.00%
Mildew	5.00%	5.00%	5.00%

### B. Field Inspections.

Two field inspections shall be made, one after seed heads are formed and one at harvest.

### C. Handling and Storage of Bulbs

1. Bulbs must be inspected once at harvest and once in a storage house prior to planting, except that when a grower follows a seed-to-seed system, no bulb inspection shall be necessary.
2. Bulbs of any class must be free from decay; uniform in size, shape, and color; and not to exceed one-half of one percent varietal mixture.

#### D. Seed Standards

<b>Factor</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Pure Seed	99.50%	99.50%	98.00%
Inert Matter	0.50%	0.50%	2.00%
Other Varieties	None	None	None
Other Crops	0.20%	0.20%	0.20%
Noxious Weeds	None	None	None
Germination	80.00%	80.00%	80.00%

**AUTHORITY NOTE:** Promulgated in accordance with R.S. 3:1433.

**HISTORICAL NOTE:** Promulgated by the Department of Agriculture, Seed Commission, LR 8:572 (November 1982), amended LR 9:197 (April 1983), repealed and repromulgated LR 12:825 (December 1986), amended LR 15:613 (August 1989), LR 23:1284 (October 1997).

### ' 183. Rescue Grass Seed Certification Standards

#### A. Field Standards

<b>Factor</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Land Requirement	5 yrs.	2 yrs.	2 yrs.
Other Varieties	None	None	None
*Isolation	900 ft.	900 ft.	330 ft.
Other Crops (inseparable)	10 plants per acre	10 plants per acre	100 plants per acre
*A portion of a field may be certified, provided that an adequate boundary of at least seven feet is established by disking or mowing before harvesting the certified portion of the field.			

#### B. Seed Standards

<b>Factor</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Pure Seed	98.00%	98.00%	95.00%
Inert Matter	2.00%	2.00%	5.00%
Other Crops	None	None	10 seed/lb.
Other Varieties	0.10%	1.00%	2.00%
Noxious Weeds	None	None	None
Other Weeds	50 seed/lb.	50 seed/lb.	360 seed/lb.
Germination	80.00%	80.00%	80.00%

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:572 (November 1982), amended LR 9:197 (April 1983), repealed and repromulgated LR 12:825 (December 1986).

## 185. Rice Seed Certification Standards

### A. Isolation Requirements

1. Fields offered for certification must be clearly separated from other fields by a ditch, levee, roadway, fence, or barren strip a minimum of 10 feet if the adjoining crop is the same variety and class.
2. In addition to the preceding regulations, the following isolation distances will pertain if the adjoining crop is a different class or different variety.

No. of Feet From Same Variety/Different Class Planted By				No. of Feet From Other Varieties/All Classes Planted By			
Ground		Air		Ground		Air	
Drill	Broadcast	Right Angle	Parallel	Drill	Broadcast	Right Angle	Parallel
10	10	1,320	10	20	100	1,320	100

3. Any part of the applicant's field or fields which are closer than these distances must be harvested prior to final inspection or plowed up. Failure to comply with this requirement will disqualify the entire field.

### B Field Standards

Factor	Breeder	Foundation	Registered	Certified
Land Requirement	1 yr.	1 yr.	1 yr.	1 yr.
Other Varieties	None	None	10 plants per acre	25 plants per acre
*Harmful Diseases	None	None	None	None
Noxious Weeds: Red Rice (including Black Hull Rice)	None	None	None	1 plant per 10 acres
Spearhead	None	None	None	2 plants per acre
Curly Indigo	None	None	4 plants per acre	4 plants per acre
*Diseases seriously affecting quality of seed and transmissible by planting stock.				

C. Seed Standards

Factor	Breeder	Foundation	Registered	Certified
Pure Seed	98.00%	98.00%	98.00%	98.00%
Inert Matter	2.00%	2.00%	2.00%	2.00%
Other Crops, including Other Varieties	None	None	None	2 seed/lb.
Off-color Grains, if of similar size, quality and maturity	None	5 seed/lb.	10 seed/lb.	20 seed/lb.
Noxious Weeds: Red Rice (including Black Hull Rice)	None	None	None	None**
Spearhead, Curly Indigo and Mexican Weed	None	None	None	None
Other Weeds	0.05%	0.05%	0.05%	0.10%
Germination		80.00%	80.00%	80.00%
**Four pounds shall be hulled from each lot to determine red rice content.				

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:576 (November 1982), amended LR 9:201 (April 1983), LR 9:754 (November 1983), LR 10:495 (July 1984), repealed and readopted LR 12:825 (December 1986), amended LR 13:157 (March 1987), LR 13:233 (April 1987), LR 14:606 (September 1988), LR 14:694 (October 1988), amended LR 15:613 (August 1989), amended LR 19:888 (July 1993).

**' 187. Seed Irish Potato Certification Standards**

**A. Inspections**

1. At least two field inspections shall be made.
2. An inspection shall be made of the tubers at the time of shipment.

**B. Field Standards**

<b>Factor</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Land Requirement	1 yr.	1 yr.	1 yr.
Isolation	10 ft.	10 ft.	10 ft.
Other Varieties and Off-type Plants	None	None	0.10%
Diseases*	0.20%	0.20%	0.20%
Mild Mosaic	0.50%	0.50%	5.00%
Sclerotium Rolfsii Wilt	0.50%	0.50%	1.00%
Potato Wart, Ring Rot, Late Blight	1.00%	1.00%	1.00%
Total Diseases	0.30%	0.30%	0.30%
Harmful Insects: Tuber Moth	None	None	None
*Rugose mosaic, leafroll, spindle tuber, yellow dwarf, witches' broom, haywire, giant hill, rosette, spinach leaf, curly dwarf.			



C. Tuber Standards

Factor	Foundation	Registered	Certified
Stem End Discoloration	2.50%	2.50%	5.00%
Hair Sprout	0.50%	0.50%	5.00 %
Spindle Tuber	0.20%	0.20%	1.00%
Scab and Rhizoctonia*	6.00%	6.00%	6.00%
Net Necrosis	0.50%	0.50%	5.00%
Late Blight, Golden and Potato Rot, Potato Wart & Ring Rot	1.00%	1.00%	1.00%
Tuber Moth	None	None	None
Sclerotium Rolfsii Wilt	0.50%	0.50%	1.00%
Nematodes (Root-Knot)**	1.00%	1.00%	1.00%
*6 percent of tubers by weight have more than five percent of the surface covered by scab or rhizoctonia.			
**1 percent of tubers by weight showing nematode (root-knot) infection.			

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:577 (November 1982), repealed and repromulgated LR 12:825 (December 1986), amended LR 20:643 (June 1994).

**' 189. Seed Irish Potato Certification Standards (Out-of-State)**

- A. Conditions governing shipment or movement of seed Irish potatoes into Louisiana shall conform to the following:
1. Seed Irish potatoes must have passed field and storage seed certification requirements of the proper certifying agency. The tolerances for insects and diseases shall be the same as those set forth in the certified seed regulation for seed Irish potatoes ( ' 187).
  2. Each container of seed moved into, offered for sale, or sold in Louisiana shall have attached thereto an official foundation, registered, or certified seed tag issued by the proper certifying agency in the state of origin.

**AUTHORITY NOTE:** Promulgated in accordance with R.S. 3:1433.

**HISTORICAL NOTE:** Promulgated by the Department of Agriculture, Seed Commission, LR 8:578 (November 1982), LR 12:825, amended LR 9:201 (April 1983), repealed and repromulgated LR 12:825 (December 1986), amended LR 14:606 (September 1988), LR 15:78 (February 1989), LR 20:644 (June 1994).

**' 191. Seed Sweet Potatoes and Sweet Potato Plant Certification Standards**

**A. Seed Bed Inspection and Standards**

1. Seed sweet potatoes must be treated with an approved pesticide prior to planting.
2. Seed beds shall be located at least 100 feet from the previous two years' seed beds, and in such manner that there will be no wash from the previous two years' seed beds, or treated in a manner satisfactory to the Department of Agriculture & Forestry.
3. Inspections shall be made to determine that quality plants, apparently free of insects and disease, are being produced.

**B. Field Inspections. At least two field inspections shall be made each year.**

**C. Field Standards**

<b>Factor</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Land Requirement	2 yrs.	2 yrs.	1 yrs.
*Isolation	20 ft.	20 ft.	20 ft.
Other Varieties	None	None	10 plants per acre
Mutations (current season)	5 plants per acre	5 plants per acre	10 plants per acre
Harmful Insects: Sweet potato weevil ( <i>Cylas formicarius</i> Fab. var. <i>eleganthus</i> Summers)	None	None	None
Harmful diseases: Stem Rot ( <i>Fusarium hyperoxysporum</i> f. <i>batatas</i> )	None	None	5 plants per acre
Soil Rot ( <i>Actinomyces ipomoea</i> )	70 plants per acre	70 plants per acre	140 plants per acre
Other Harmful Diseases	None	None	None
*In sweet potato plant certification, the unit of certification shall be a seed bed or seed row, and such unit cannot be divided for the purpose for certification			

D. Storage and Grading Requirements

1. Before sweet potatoes grown for certification can be stored, the storage house must be cleaned and disinfected in a manner approved by the Department of Agriculture and Forestry.
2. Sweet potatoes grown for certification shall be stored in new standard crates or used containers that have been treated with an approved pesticide.
3. Each unit of sweet potatoes that passed field inspection shall be:
  - a. marked or labeled to correspond with the field unit;
  - b. treated with an approved pesticide; and
  - c. separated in storage by an aisle at least two feet wide.
4. Sweet potatoes entered for certification must be well shaped. The minimum size shall be one inch in diameter and four inches in length, 30 ounces maximum weight.
5. Specific grades of sweet potatoes in accordance with federal regulations shall be optional to the grower and purchaser.
6. A minimum of 20 percent of each lot of sweet potatoes entered for certification shall be inspected by the Louisiana Department of Agriculture & Forestry during the storage inspection.

E. Root Standards

Factor	Foundation	Registered	Certified
Off-type (mutations)	0.20%	0.20%	0.50%
Harmful Insects: Sweet potato weevil ( <i>Cylasformicarius</i> Fab. var. <i>eleganthus</i> Summers)	None	None	None
Harmful Diseases: Soil Rot ( <i>Actinomyces</i> <i>ipomoea</i> )	2.50%	2.50%	5.00%
Black Rot ( <i>Ceratostamella fimbriata</i> )	None	None	None
Scurf ( <i>Monilochaetes infuscans</i> )	1.00%	1.00%	2.00%
Surface Rot ( <i>Fusarium oxysporum</i> )	None	None	5.00%

1. There shall not be more than 10 percent of sweet potatoes of poor quality and/or poor condition brought about by internal breakdown, lack of latex, excessive bruising, chilling, or any other factor, and not more than a total of 15 percent of the foregoing factors that would cause the sweet potatoes to be of poor quality and/or condition.

F. Tagging and Certificate Tape

1. Each container of seed sweet potatoes and all certified sweet potato plants shall be tagged as follows:
  - a. foundation (white tag);
  - b. registered (purple tag); and
  - c. certified (blue tag).
2. Each tag shall contain the following:
  - a. kind and variety;
  - b. year in which grown; and
  - c. grower's name and address.
3. Sweet potato plants shall be tied in bundles of approximately 100 each with official tape issued by the Department of Agriculture & Forestry.

G. Sweet Potato Weevil Quarantine Area

1. Sweet potato plants grown in a sweet potato-weevil quarantine area will be approved for seed or plant sources within the quarantined area only if:
  - a. all requirements for certification are met;
  - b. there are no sweet potato weevils within a two-mile radius of the field or storage house; and;
  - c. all seed and/or plants are fumigated in an approved manner.
2. No certified seed tags or sweet potato tape will be issued to cover sweet potatoes in a sweet potato weevil quarantine area.

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:579 (November 1982), amended LR 9:202 (April 1983), repealed and readopted LR 12:825 (December 1986), amended LR 22:1210 (December 1996).

**' 193. Sesame Seed Certification Standards**

**A. Field Standards**

<b>Factor</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Land Requirement	1 yr.	1 yr.	1 yr.
Isolation	1,200 ft.	1,200 ft.	600 ft.
Other Varieties	5 plants per acre	7 plants per acre	10 plants per acre

**B. Seed Standards**

<b>Factor</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Pure Seed	98.00%	98.00%	98.00%
Inert Matter	2.00%	2.00%	2.00%
Other Varieties	10 seed/lb.	50 seed/lb.	100 seed/lb.
Noxious Weeds: Cheat and I	6 seed/lb.	6 seed/lb.	12 seed/lb.
Germination	80.00%	80.00%	80.00%

**AUTHORITY NOTE:** Promulgated in accordance with R.S. 3:1433.

**HISTORICAL NOTE:** Promulgated by the Department of Agriculture, Seed Commission, LR 8:582 (November 1982), amended LR 9:197 (April 1983), repealed and readopted LR 12:825 (December 1986), amended LR 22:1210 (December 1996).

**' 195. Small Grain (Oats, Wheat, Rye) Seed Certification Standards**

**A. Field Standards**

<b>Factor</b>	<b>Breeder</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Land Requirement	1 yr.	1 yr.	1 yr.	1 yr.
Isolation	None	10 ft.	10 ft.	10 ft.
Rye	660 ft.	660 ft.	660 ft.	660 ft.
Other Crops	None	None	10 plants per acre	30 plants per acre
Other Varieties	None	None	10 plants per acre	30 plants per acre
Diseases: Loose Smut	None	1.00%	1.00%	1.00%

**B. Seed Standards**

<b>Factor</b>	<b>Breeder</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Pure Seed	98.00%	98.00%	98.00%	97.00%
Inert Matter	2.00%	2.00%	2.00%	3.00%
Other Crops	None	5 seed/lb.	5 seed/lb.	10 seed/lb.
Other Varieties	None	1 seed/lb.	5 seed/lb.	10 seed/lb.
Noxious Weeds: Johnsongrass Cheat and Darnel	None None	None 6 seed/lb.	None 6 seed/lb.	None 12 seed/lb.
Other Weeds	None	0.01%	0.02%	0.03%
Oats	None	0.02%	0.05%	0.10%
Germination	None	85.00%	85.00%	85.00%

**AUTHORITY NOTE:** Promulgated in accordance with R.S. 3:1433.

**HISTORICAL NOTE:** Promulgated by the Department of Agriculture, Seed Commission, LR 8:582 (November 1982), amended LR 9:197 (April 1983), repealed and readopted LR 12:825 (December 1986).

## **197. Shallot Seed Certification Standards**

### **A. Land Requirement**

The unit of certification shall be a field, which must be at least 300 feet from garlic, onions, or uncertified shallots and shall not have been planted to shallots for two previous years.

### **B. Field Inspections**

Three or more inspections shall be made of the shallots while growing:

1. The first inspection shall be in the seed bed, between November 15 and December 15. On first inspection, more than five percent severe yellow dwarf shall cause the shallots in the entire plot to be ineligible for certification.
2. The second inspection shall be after transplanting, during March or April. On second inspection, yellow dwarf infection shall not exceed one percent in any area of a unit plot.
3. The third inspection shall be just prior to or at harvest time, generally around May 1 through May 15. A field having in excess of three percent plants or irregular growth and maturity and/or more than three percent pink root infection shall be ineligible for certification.

### **C. Storage Requirements**

1. There shall be at least one inspection of the seed while in storage between June 15 and July 15.
2. The identity of shallot seed produced in each unit plot must be maintained by the grower.
3. Shallot seed with more than three percent storage rot and/or pink root infection shall not be eligible for certification.
4. Seed severely infested with bulb mites shall not be eligible for certification. Seed lightly infested with bulb mites must be treated in a manner prescribed by the Department of Agriculture & Forestry before certified permit tags will be issued.

### **D. Use of Certified Tags for Shallots**

Shallot certificate permit tags shall be valid only during the season (June 1 of one year through May 31 of the succeeding year) in which issued and shall be invalid after being used one time only.

**AUTHORITY NOTE:** Promulgated in accordance with R.S. 3:1433.

**HISTORICAL NOTE:** Promulgated by the Department of Agriculture, Seed Commission, LR 8:583 (November 1982), amended LR 9:197 (April 1983), repealed and readopted LR 12:825 (December 1986).



**' 199. Singletary Pea Seed Certification Standards**

**A. Field Standards**

<b>Factor</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
*Land Requirement	1 yr.	1 yr.	1 yr.
Isolation	12 ft.	12 ft.	12 ft.
Other Varieties	3 plants per acre	3 plants per acre	6 plants per acre
*Land must be free from vetch.			

**B. Seed Standards**

<b>Factor</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Pure Seed	97.00%	97.00%	97.00%
Inert Matter	3.00%	3.00%	3.00%
Other Crops	2 seed/lb.	2 seed/lb.	3 seed/lb.
Other Varieties	2 seed/lb.	2 seed/lb.	5 seed/lb.
Noxious Weeds	None	None	None
Other Weeds	10 seed/lb.	10 seed/lb.	10 seed/lb.
Germination	80.00%	80.00%	80.00%

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:583 (November 1982), amended LR 9:197 (April 1983), repealed and readopted LR 12:825 (December 1986).

**' 201. Sorghum Seed Certification Standards**

**A. Field Standards**

<b>Factor</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
*Land Requirement	1 yr.	1 yr.	1 yr.
Isolation	1,300 ft.	1,300 ft.	1,300 ft.
Other Varieties	None	1 head per 5 acres	1 head per 2 acres
Head smut	None	1 head per acre	1 head per acre
Kernel smut	None	None	1 head per 2,500 heads
*No field will be eligible for certification if it grew sudan grass, broomcorn, or sorghum of another variety the previous year.			

**B. Seed Standards**

<b>Factor</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Pure Seed	98.00%	98.00%	98.00%
Inert Matter	2.00%	2.00%	2.00%
Other Varieties	None	None	9 seed/lb.
Other Crops	None	5 seed/lb.	5 seed/lb.
Noxious Weeds	None	None	None
Germination	80.00%	80.00%	80.00%

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:583 (November 1982), amended LR 9:197 (April 1983), repealed and readopted LR 12:825 (December 1986).

## ' 203. Soybean Seed Certification Standards

### A. Field Standards

Factor	Breeder	Foundation	Registered	Certified
*Land Requirement	1 yr.	1 yr.	1 yr.	1 yr.
Isolation		10 ft.	10 ft.	10 ft.
Other Varieties	None	None	3 plants per acre	10 plants per acre
Noxious Weeds: Purple Moonflower (Ipomoea turbinata)	None	None	2 plants per acre	5 plants per acre
Balloonvine (Cardiospermum halicacabum)	None	None	None	None
*Land requirement will be waived if the previous crop was grown from certified seed of the same variety, or of a variety having different plant pubescence or hilum color from the variety to be certified.				

### B. Seed Standards

Factor	Breeder	Foundation	Registered	Certified
Pure Seed	98.00%	98.00%	98.00%	98.00%
Inert Matter	2.00%	2.00%	2.00%	2.00%
Other Crops	None	2 seed/lb.	2 seed/lb.	5 seed/lb.
Other Varieties	None	2 seed/lb.	2 seed/lb.	5 seed/lb.
Noxious Weeds	None	None	None	None
Other Weeds	0.05%	10 seed/lb.	10 seed/lb.	10 seed/lb.
Germination	None	80.00%	80.00%	80.00%

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:583 (November 1982), amended LR 9:197 (April 1983), repealed and readopted LR 12:825 (December 1986), amended LR 15:613 (August 1989).

**' 205. Southern Field Pea (Cowpea) Seed Certification Standards**

**A. Field Standards**

<b>Factor</b>	<b>Breeder</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Land Requirement	1 yr.	1 yr.	1 yr.	1 yr.
Isolation	None	10 ft.	10 ft.	10 ft.
Other Varieties and Off-type Plants	None	3 plants per acre	3 plants per acre	3 plants per acre

**B. Seed Standards**

<b>Factor</b>	<b>Breeder</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Pure Seed	99.00%	98.00%	98.00%	98.00%
Inert Matter	1.00%	2.00%	2.00%	2.00%
Other Crops	None	None	None	1 seed/lb.
Other Varieties	None	None	None	1 seed/lb.
Noxious Weeds	None	None	None	None
Other Weeds	None	None	None	1 seed/lb.
Germination	80.00%	80.00%	80.00%	80.00%

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:583 (November 1982), amended LR 9:197 (April 1983), repealed and readopted LR 12:825 (December 1986), amended LR 23:1284 (October 1997).

## **§207. Sugarcane (Tissue Culture) Certification Standards**

### **A. Limitation of Stand Eligibility**

1. Source of foundation stock is limited only to material obtained from the Louisiana State University Agricultural Center (LSUAC) or USDA-ARS Sugarcane Research Unit sugarcane variety selection programs that has been processed through the LSUAC sugarcane quarantine program.
  - a. Foundation stock shall be tested on a yearly basis for Sugarcane Ratoon Stunting Disease. Tissue sample testing and protocol shall be provided by the LSU Ag Center Sugarcane Disease Detection Lab. The certifier shall provide to the Louisiana Department of Agriculture & Forestry verification that foundation stock has been tested for Sugarcane Ratoon Stunting Disease (RSD).
2. Additional propagation of original foundation stock shall be according to procedures determined by the American Sugar Cane League, the Louisiana Department of Agriculture & Forestry, the LSUAC, and the USDA-ARS Sugarcane Research Unit.
3. Source of registered stock is limited to plantlets produced through tissue culture of foundation material or the first ratoon thereof.
  - a. Stock that meets all standards except insect and/or weeds standards be maintained in the program as seed increase fields only, but may not be marketed to producers. Such stocks are eligible for re-certification once they come in compliance with applicable regulations.
4. Source of certified stock is limited to:
  - a. three consecutive years from planting of registered stock; and
  - b. two consecutive harvests of certified stock.

### **B. Field Inspections and Sampling**

1. At least four field inspections by Louisiana Department of Agriculture & Forestry inspectors shall be made each year to determine if certified seedcane is being produced that apparently meets field standards.
  - a. The third inspection to be conducted in June by Louisiana Department of Agriculture & Forestry inspectors will include the collection of leaf samples for the detection of Sugarcane Yellow Leaf Virus.
  - b. Individual fields shall be sampled by Louisiana Department of Agriculture & Forestry inspectors for the detection of Sugarcane Yellow Leaf Virus according to the following guidelines:

Field Size in Acres	# Leaf Tissue Samples per Field
Less than 5 Acres*	25
5-10 Acres	50
Greater than 10 Acres	75

\*Minimum of 25 Leaf Tissue Samples per Field

- c. Tissue samples shall be submitted to the LSU Ag Center Sugarcane Disease Detection Lab for analysis
- d. The Department shall have the right to re-inspect, re-sample and re-test fields that are out of tolerance for Sugarcane Yellow Leaf Virus prior to certification.

#### C. Land Requirements

The land shall be fallowed one summer from the previous crop.

#### D. Field Standards

Factor	Foundation	Registered	Certified
Isolation	10 ft.	10 ft.	10 ft.
Other Varieties (obvious)	None	1.00%	1.00%
Off-type (definite)	None	1.00%	1.00%
Noxious Weeds: Johnsongrass Itchgrass	None None	5 plants per acre 1 plant per acre	5 plants per acre 1 plant per acre
Other Weeds: Browntop panicum (Panicum fasciculatum)	None	20 plants/acre	20 plants/acre
Harmful Diseases: Sugarcane Yellow Leaf Virus*	None	10.00%	10.00%
Sugarcane Mosaic Virus**	None	5.00%	5.00%
Sugarcane Smut**	None	0.5%	0.5%
Harmful Insects: Sugarcane Borer***	None	5.00%	5.00%
*Determined by lab analysis from the LSU Ag Center Sugarcane Disease Detection Lab. **Determined by plants exhibiting symptoms. ***Determined by percentage of internodes bored.			

E. Stock Handling

1. General Requirements

- a. During harvest, constant care should be taken in the handling of certified seed to ensure genetic identity and purity.
  - b. Stock shall be labeled or identified in a manner such as to represent a lot or field.
2. Planting stock shall be subject to inspection by the Louisiana Department of Agriculture & Forestry at any time during the harvest season.

F. Reporting System

1. No certified seed tags will be issued for certified sugarcane stock.
2. The certifier shall be furnished certification forms by the Louisiana Department of Agriculture & Forestry and shall:
  - a. issue a copy of the certification form to the purchaser for each load;
  - b. send a copy of each issued certification form to the Louisiana Department of Agriculture & Forestry within 10 days after each sale; and
  - c. maintain a copy of each issued certification form on file, which shall be available for examination by the Louisiana Department of Agriculture & Forestry upon request.

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 12:825 (December 1986), amended LR 23:1284 (October 1997).

**209. Sunflower Seed Certification Standards**

**A. Field Inspections**

Two inspections shall be made of the growing crop, the first at early blooming stage and the second just before harvest. Only one inspection shall be required in the case of open-pollinated varieties.

**B. Field Standards**

1. Sunflower seed grown for certification shall not be on land that was planted the previous year to sunflower of another variety.

2. The isolation distance between varieties for all classes shall be at least 2,640 feet.

3. Flowering

In a crossing field for the production of hybrid sunflower seeds, the male parent must be in bloom and producing pollen at the time the female parent is in bloom. If the female sunflower heads produce pollen before the male parent heads, then the female pollen must be removed to prevent cross-pollination.

4. Maximum Impurity Tolerances (maximum limits per 1,000 plants)

<b>Hybrid Production Foundation and Certified</b>	<b>Female Seed Parent</b>	<b>Male Pollinating Parent</b>
Maximum (including off-types)	1	1
Wild-type branching	1	1
Purple plants	1	1
White seeded	1	0
Obvious off-types	4	4

**C. Seed Standards**

<b>Factor</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Pure Seed	99.00%	99.00%	98.00%
Inert Matter	1.00%	1.00%	2.00%
Other Crops	None	None	1 seed/lb.
Other Varieties	1 seed/lb.	1 seed/lb.	1 seed/lb.
Weed Seeds	None	None	None
Germination	90.00%	90.00%	90.00%

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:586 (November 1982), amended LR 9:197 (April 1983), repealed and readopted LR 12:825 (December 1986).



**' 211. Tall and Meadow Fescue Seed Certification Standards**

**A. Field Standards**

Factor	Foundation	Registered	Certified
Land Requirement	5 yrs.	2 yrs.	2 yrs.
Isolation	900 ft.	330 ft.	330 ft.
Other Varieties	10 plants per acre	10 plants per acre	100 plants per acre

**B. Seed Standards**

Factor	Foundation	Registered	Certified
Pure Seed	98.00%	98.00%	95.00%
Inert Matter	2.00%	2.00%	5.00%
Other Varieties	0.01%	1.00%	2.00%
Other Crops	None	None	10 seed/lb.
Noxious Weeds	None	None	None
Other Weeds	50 seed/lb.	50 seed/lb.	360 seed/lb.
Germination	80.00%	80.00%	80.00%

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:586 (November 1982) amended LR 9:197 (April 1983), LR 10:737 (October 1984), repealed and readopted LR 12:825 (December 1986).

**213. Tomato Seed Certification Standards**

**A. Inspections**

1. At least two field inspections shall be made.
2. One inspection shall be made when crop is at or near full fruit.

**B. Field Standards**

<b>Factor</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Land Requirement	2 yrs.	2 yrs.	2 yrs.
Isolation	200 ft.	100 ft.	30 ft.
Other Varieties & Off-type Plants	None	0.05%	0.10%
Tomato Mosaic Virus	0.20%	0.20%	0.50%
Bacterial Spot	0.50%	1.00%	1.00%
Bacterial Speck	0.50%	1.00%	1.00%
Bacterial Canker	None	None	0.10%
Early Blight	0.50%	1.00%	1.00%
Phytophthora Foot Rot	1.00%	1.00%	1.00%
Septoria Foliage Blight	0.50%	1.00%	1.00%
Nailhead Spot	0.50%	1.00%	1.00%
Phoma Rot	0.50%	1.00%	1.00%
Fusarium Wilt	1.00%	1.00%	1.00%
Late Blight	1.00%	1.00%	1.00%

**C. Management**

Fields designated for production of any certified class of seed shall have no fruits removed for marketing purposes.

D. Seed Standards

<b>Factor</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Pure Seed	99.00%	98.00%	98.00%
Inert Matter	1.00%	2.00%	2.00%
Other Crops	None	None	0.01%
Other Varieties	None	0.10%	0.20%
Noxious Weeds	None	None	None
Other Weeds	None	0.01%	0.03%
Germination	75.00%	75.00%	75.00%

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture & Forestry, Seed Commission, LR 14:604 (September 1988).

## **' 215. Tree Seed Certification Standards**

### **A. Classes of Seed**

1. Only the following classes of tree seed shall be recognized in tree seed certification:
  - a. certified (blue tag);
  - b. selected (green tag); and
  - c. source-identified (yellow tag).
2. For all classes of forest tree seed, the exact geographic source of the parent trees and the stand must be known. Location of the source shall be given at least down to the section or comparable land survey unit. (Alternatively, in the case of seed from seed orchards containing selected stocks from a number of separate sections, the location of the orchard shall be given and the exact source of its individual components shall be kept on file and furnished on request.)

### **B. Land Requirements**

Elevation to the nearest 500 feet of the original geographic source and the average height and age of the trees from which seed has been collected shall be shown on the tag for all forest tree seed. If available, site index (the capacity of a given site to produce trees as measured by the height of the trees at a specified age) may be recorded instead of tree height and age.

### **C. Field Inspection**

A field inspection must be made prior to flowering.

### **D. Field Standards**

#### **1. Unit of Certification**

An individual tree, clone or stand of trees may be certified in producing certified or selected seed.

#### **2. Isolation**

For certified or selected seed, an adequate isolation zone shall be maintained free of off-type plants and other species which might crosspollinate producing trees. There shall be no isolation requirements for source-identified trees.

#### **3. Progeny Testing**

All clones used in seed orchards shall be progeny tested.

E. Seed Standards

<b>Factor</b>	<b>Certified</b>	<b>Select</b>	<b>Source Identified</b>
Pure Seed	98.00%	98.00%	98.00%
Inert Matter	2.00%	2.00%	2.00%
Other Species	0.01%	0.01%	0.50%
Germination	85.00%	85.00%	85.00%

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:587 (November 1982), amended LR 9:197 (April 1983), repealed and readopted LR 12:825 (December 1986).

**'217. Watermelon Seed Certification Standards**

**A. Field Inspection**

1. The initial inspection will be made before the first blooms are open. At this time, volunteer plants and citron must be removed from the field to be certified and the isolation zone by the grower.
2. The second inspection will be made when the melons are ready to harvest. The presence of any citron plants within 2,640 feet of a unit entered for foundation or registered classes or within 1,320 feet of a unit entered for certified class will disqualify the unit for certification.

**B. Field Standards**

<b>Factor</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Land Requirement	1 yr.	1 yr.	1 yr.
Isolation	2,640 ft.	2,640 ft.	1,320 ft.
At Harvest Time: Citron White Heart Fruits	None None	None 2.00%	None 5.00%
Total Off-type Plants or Varietal Mixtures	None	None	2 plants per acre
Plants free from Fusarium Wilt*	93.00%	93.00%	90.00%
Plants free from Anthracnose	95.00%	95.00%	90.00%
*Applies to wilt-resistant varieties only			

C. Seed Standards

<b>Factor</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Pure Seed	98.00%	98.00%	98.00%
Inert Matter	2.00%	2.00%	2.00%
Other Crops	None	2 seed/lb.	5 seed/lb.
Other Varieties	None	None	4 seed/lb.
Citron	None	None	None
Weed Seeds	None	None	0.05%
Germination	80.00%	80.00%	80.00%

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 8:588 (November 1982), amended LR 9:197 (April 1983), repealed and readopted LR 12:825 (December 1986).

**' 219. Turf and Pasture Grass Certification Standards**

**A. Classes of Seed**

The word "seed" shall be understood to include all propagated materials in this Section.

1. Foundation shall be the vegetative increase of Breeder seed.
2. \*Registered shall be the vegetative increase of Foundation seed.
3. Certified shall be the vegetative increase of Registered seed.

\*A grower may increase his acreage on his own farm on a limited basis with the approval of the Louisiana Department of Agriculture & Forestry.

**B. Land Requirements**

1. Sod and Sprigs (pre-planting inspections)
  - a. A field to be eligible for the production of all certified classes of sod shall be left undisturbed for a minimum of four weeks prior to planting and found to be free of noxious and objectionable weeds.
  - b. A recommended soil fumigation may be applied by a licensed applicator, followed by an inspection by the Louisiana Department of Agriculture & Forestry a minimum of four weeks after the application, to ensure no emergence of noxious and objectionable weeds prior to planting.

**C. Field Inspections**

Turf Grasses and Pasture Grasses entered into the certification program shall be inspected at least three times a year: first (April-May); second (August-September); third (December-January) to ensure the quality of the grasses has met or exceeded the minimum standards set forth in these regulations. If a field is found to be deficient in meeting the standards then the producer has the option of spot roguing the undesirable, if the Louisiana Department of Agriculture & Forestry deems possible, and call for a reinspection of the crop.



D. Field Standards

Factor	Foundation	Registered	Certified
<b>Turf grasses (Sprigs and Sod)</b>			
Other Varieties	None	None	1 plant/1000 sq.ft.
Other Crops	None	None	1 plant/1000 sq.ft.
Noxious and Objectionable Weeds	None	None	None
Harmful Diseases	None	None	None
Isolation	6 ft.	6 ft.	6 ft.
<b>Pasture grass (Sprigs)</b>			
Other Varieties	None	1 plant/1000 sq.ft.	3 plants/1000 sq.ft.
Other Crops	None	None	3 plants/1000 sq.ft.
Noxious and Objectionable Weeds	None	None	None
Harmful Diseases	None	None	None
Isolation	30 ft.	30 ft.	30 ft.

1. Other varieties consist of other strains of the species that can be differentiated from the variety or varieties that are being inspected.
2. Noxious and objectionable weeds. Noxious and objectionable weeds are with the inclusions of, but not limited to, the following plants: Virginia button weed (*Diodia virginiana*); dallisgrass (*Paspalum dilatatum*); crabgrass (*Digitaria spp.*); goosegrass (*Eleusine indica*); bahiagrass (*Paspalum notatum*); torpedograss (*Panicum repens*); nutgrass (*Cyperus esculentus*, *C. rotundus*)
3. Harmful Diseases. Harmful diseases are diseases that seriously affect the quality of grasses and are transmitted by planting stock.
4. Isolation

Isolation shall be a barren strip or an approved crop to maintain purity without the risk of contamination.

E. Planting Stock Standards

Factor	Foundation	Registered	Certified
<b>Turf Grass</b>			
Pure Live Plants	90.00%	90.00%	90.00%
Noxious and Objectionable Weeds	None	None	None
Other Varieties	None	0.05%	0.05%
Other Crop	None	None	0.05%
Harmful Diseases	None	None	None
<b>Pasture Grass</b>			
Pure Live Sprigs containing roots (minimum by count)	90.00%	90.00%	90.00%
Other Live Plants (maximum by count)	2.00%	2.00%	2.00%
Noxious Weeds	None	None	None

F. Reporting System

1. Issuing Certificates

- a. The grower will be issued numbered certificates of certification and tags by the Louisiana Department of Agriculture & Forestry upon request that must accompany each load of certified grass sold.
- b. The grower is responsible for completing the forms and returning the appropriate copies to the Louisiana Department of Agriculture & Forestry within 10 working days of issuance.

2. Tagging System

- a. Upon meeting the standards set forth in these regulations the certified crop must have attached to the invoice two tags: A) one from the seed certification division; and B) one from the horticulture division of the Department of Agriculture & Forestry.
- b. This two-tag system shall distinguish the crop to have met or exceeded the requirements set by both divisions of the Department of Agriculture and Forestry.

**AUTHORITY NOTE:** Promulgated in accordance with R.S. 3:1433.

**HISTORICAL NOTE:** Promulgated by the Department of Agriculture, Seed Commission, LR 9:204 (April 1983), repealed and readopted by the Department of Agriculture & Forestry, LR 12:825 (December 1986), amended LR 16:847 (October 1990).

**' 221. Vetch Seed Certification Standards**

**A. Classes of Vetch Seed**

**1. Non-reseeding varieties**

Recognized certified seed classes shall be breeder, foundation, registered and certified vetch seed.

**2. Hard-seeded Varieties**

Whenever a field of hard-seeded vetch has been established to produce either breeder, foundation, registered or certified seed, the same certified seed class can be produced from that field as long as it remains in production and meets minimum seed certification standards.

**B. Field Inspection**

Field Inspection shall be made at flowering time or before harvest when off-types and varietal mixtures can best be identified.

**C. Field Standards**

<b>Factor</b>	<b>Foundation</b>	<b>Registered</b>	<b>Certified</b>
Land Requirement	5 yrs.	3 yrs.	2 yrs.
Isolation: Self-pollinating varieties Cross-pollinating varieties	10 ft. 400 ft.	10 ft. 400 ft.	10 ft. 400 ft.
Other Varieties & Off-types	1 per 1,000	1 per 400	1 per 100
Other Crops	1 per 4,000	1 per 2,000	1 per 400
Noxious Weeds (inseparable)	None	None	None

D. Seed Standards

Factor	Foundation	Registered	Certified
Pure Seed	98.00%	98.00%	98.00%
Inert Matter	2.00%	2.00%	2.00%
Total Other Crops	0.35%	0.75%	1.50%
Other Varieties	0.10%	0.25%	1.00%
Noxious Weeds	None	None	None
Other Weeds	0.10%	0.25%	0.25%
Germination	80.00%	80.00%	80.00%

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Promulgated by the Department of Agriculture, Seed Commission, LR 9:205 (April 1983), amended LR 10:737 (October 1984), repealed and readopted LR 12:825 (December 1986).

## ' 222. Virus-tested Sweet Potato Certification Standards

### A. Explanation of general standards as applied to Sweet Potatoes

1. The general "seed" certification standards as adopted are basic and together with the following specific standards constitute the standards for certification of virus-tested sweet potatoes.

2. Definitions

*Mericlones* - all plants clonally propagated from a single meristem tip. For example, mericlone B-63 includes all plants descended from the sixty-third meristem-tip culture derived from the variety Beauregard.

*Micropropagated* - is the art and science of plant multiplication in vitro. The process includes many steps--stock plant care, explant selection and sterilization, media manipulation to obtain proliferation, rooting, acclimation, and growing on. Sweet potato is most commonly micropropagated in tissue culture by aseptic transfer of stem segments containing 1-3 nodes to sterile tissue culture medium.

*Vine cutting* - sections preferably 8-12 inches in length cut from vines that can be transplanted in the greenhouse or field. All such cuttings will be made at least one inch above the surface of the soil or growing medium, slips that have been pulled are not to be used to avoid the possibility of carrying pathogens or insects that can be present on stems below the soil surface.

*Virus-tested* - a plant that has been previously tested for the presence of viruses on at least three separate occasions by grafting to the standard indicator plant for sweet potato viruses, the Brazilian morning glory (*Ipomoea setosa*). If the plant is found to be negative (no symptoms developed on the indicator) each time, it is considered virus tested since it is not possible to absolutely prove the absence of any and all viruses.

3. The general standards are further defined as follows to apply specifically to virus-tested sweet potatoes. Classes and sources of certified "seed" are defined as follows:
  - a. *Source Seed* - shall be material entering the Louisiana Agricultural Experiment Station (LAES) seed program obtained by methods acceptable to the Louisiana Department of Agriculture & Forestry (LDAF).
  - b. *Nuclear Stock Plants* - shall be source seed that has been micropropagated, virus-tested, apparently free of other pests, and evaluated in field test for trueness to variety. This material shall be maintained under strict isolation in laboratory facilities maintained by LAES and/or any contracted micropropagation provider and approved by LDAF. The facilities shall be in a clean, dust-free building and be separated from any greenhouse or sweet potato storage operations. This building shall be at least 250 feet from any sweet potato field or greenhouse.

- c. *Foundation Plants* - shall be greenhouse plants, produced by the LAES from nuclear stock plants that are virus-tested and recognized by LDAF. These plants must be grown under strict isolation in screen cages in which only plants that are virus-tested are grown.
- d. *Certified G0*- shall be greenhouse plants produced by certified greenhouse growers from Foundation Plants. *Certified G0* Plants will be propagated as follows:
  - i. *Mother Plants* - are the plants obtained from LAES. Mother plants will be kept isolated in screen cages. *Mother plants* may be cut repeatedly for up to no more than 5 months to produce *daughter plants*.
  - ii. *Daughter Plants* - are plants produced by cuttings from mother plants. *Daughter plants* may be cut repeatedly for up to no more than 5 months to produce additional daughter plants.
    - (a). All plants produced from these propagations will be designated as *certified G0* and may be used to establish *certified G1* field plantings.
  - iii. *Mini-roots* - storage roots produced on plants grown in *certified G0* greenhouses may be used to establish *certified G2* field plantings.
    - (a). All plants, vine cuttings and roots produced from these mini-roots shall be designated as *certified G2*.
- e. *Certified G1* (Field Generation 1) - *certified G1* plantings will be established from *certified G0* Plants. Vine cuttings may be taken repeatedly from this original G1 planting, to establish a second G1 planting. Vine cuttings may be taken repeatedly from the second G1 planting to establish a third G1 planting. No additional plantings may be established from this third G1 planting.
  - (a). All vine cuttings and roots produced during this first year of field production shall be designated as *certified G1*.
- f. *Certified G2* (Field Generation 2) - *certified G2* plantings will be established from *certified G1* stocks. Vine cuttings may be taken repeatedly from this original G2 planting, to establish a second G2 planting. Vine cuttings may be taken repeatedly from the second G2 planting, to establish a third G2 planting. No additional plantings may be established from this third G2 planting.
  - (a). All vine cuttings and roots produced during this second year of field production shall be designated as *certified G2*.
- g. *Certified G3* (Field Generation 3) - *certified G3* plantings will be established from *certified G2* stocks. Vine cuttings may be taken repeatedly from this original G3 planting, to establish a second G3 planting. Vine cuttings may be taken repeatedly from the second G3 planting to establish a third G3 planting. No additional plantings may be established from this third G3 planting.
  - (a). All vine cuttings and roots produced during this third year of field production shall be designated as *certified G3*.

## B. Greenhouse Requirements

### 1. Production

- a. *Mother plants* will be kept isolated in screen cages.
- b. For Greenhouse production it is required that:
  - i. entry shall be through double doors;
  - ii. a system for sanitizing hands and feet shall be in place;
  - iii. doors shall be kept locked;
  - iv. yellow sticky traps shall be used to monitor aphids and other insects;
  - v. screens of such mesh as to prevent entry of aphids shall be placed over all openings (vents, fans, windows, etc.);
  - vi. greenhouses shall be clearly marked to warn workers that they shall not enter, if they are coming from the field or from other noncertified greenhouses;
  - vii. aphids, whiteflies or other insects with sucking, mouthparts shall be controlled;
  - viii. decontaminate cutting tools on a regular basis and always when moving to another group of stock plants or plant lots;
  - ix. all growing medium (e.g. soil), containers, etc. used in the greenhouse must be sanitized by a method approved by LDAF;
  - x. all plants shall be removed from the greenhouse and the greenhouse kept free of plants for a minimum of 6 weeks between crop years.

### c. Isolation

- i. There shall be no plants growing within 10 feet of the greenhouse (grass for stabilization will be permitted, but weeds must be controlled).
- ii. No other plants are allowed in the greenhouse.
- iii. Greenhouses should be as far away as possible from sweet potato storage sheds, cull piles or other potential sources of sweet potato viruses.

- d. Different varieties or mericlones must be clearly identified and separated.

- e. LDAF must approve greenhouses before *mother plants* will be released to the grower.

### 2. Inspections

#### a. Grower

- i. Producer will inspect vines twice weekly. If symptomatic plants are found, they will be removed and destroyed and parent plants will be inspected for disease symptoms. The grower will keep a log showing that inspections were made and if plants were removed.
- ii. There will be a weekly inspection in and around the greenhouse perimeters to ensure isolation standards are being met.
- iii. If problems are observed during weekly inspections the producer

should notify LDAF.

b. LDAF

- i. LDAF will inspect certified greenhouses several times during the year as needed. If symptomatic plants are found during these inspections they must be rogued and disposed of properly.
- ii. Once shipping of plants begins, final certification will not be allowed if symptomatic plants are found.

3. Inspection Standards

a. General Requirements

- i. Unit of Certification shall be the entire greenhouse and such unit cannot be divided for the purpose for certification.
- ii. Isolation requirements are described in ' 222.B. 1.c.
- iii. Increase requirements are described in ' 222. A. 3.

b. Specific Greenhouse Requirements

<b>Presence or symptoms of:</b>	<b>Maximum Tolerance Allowed</b>	
	<b>Foundation (LAES)</b>	<b>Certified GO</b>
Bacterial Stem Rot ( <i>Erwinia chrysanthemi</i> )*	0	0
Black Rot ( <i>Ceratocystis fimbriata</i> )*	0	0
Scurf ( <i>Monilochaetes infusans</i> )*	0	0
Root-Knot Nematode ( <i>Meloidogyne</i> spp.)	0	0
Feathery Mottle (sweet potato feathery mottle virus [SPFMV])*	0	0
Russet Crack (a strain of SPFMV)*	0	0
Internal Cork (a virus)*	0	0
Wilt ( <i>Fusarium oxysporum</i> f. sp. <i>batatas</i> )*	0	0
Sweet potato Weevil ( <i>Cylas formicarius</i> var. <i>elegantulus</i> )	0	0
Exotic or hazardous pests	0	0
Variety mixture	0	0
Off-types (mutations)	0	0

\* Plants or mini-roots exhibiting symptoms

**C. Field Requirements**

1. Production

- a. All sweet potatoes produced in a field for certification must be grown from virus-tested stock.
- b. Virus-tested C1 sweet potato "seed" will not be eligible for certification if produced on land which:
  - i. has produced sweet potatoes in the last 2 years;
  - ii. has received manure or sweet potato residue in the last 2 years;
  - iii. is subject to drainage from fields in which sweet potatoes have been grown in the last 2 years.



c. Isolation

1. Virus-tested sweet potato "seed" production fields shall be 750 feet from other sweet potatoes.
- ii. An approved program shall be in place to control perennial plants of morning glories (e.g. *Ipomoea pandurata*, Bigroot Morning Glory, *Ipomoea cordatotriloba* sharp-pod or cotton Morning Glory), and volunteer sweet potato plants.

d. Different varieties or mericlones will be clearly identified and separated from each other by 20 feet.

e. Each unit of sweet potatoes that passed field inspection shall be marked or labeled at harvest to correspond with the field unit.

2. Inspections

a. The grower should inspect fields regularly during the growing season and remove any symptomatic plants that are found. LDAF should be informed if any problems are found.

b. At least two inspections by LDAF will be made during the growing season; others will be made if necessary.

- i. At least one seedbed inspection will be made when applicable.
- ii. First field inspection shall be made before vines have covered the ground so that symptomatic plants may be easily identified. Roguing will consist of pulling up the symptomatic plants, bagging them, and removing them from the field.
- iii. Final inspection shall be made near to harvest.

3. Inspection Standards

a. General requirements

- i. Unit of certification for production is a field and such unit cannot be divided for the purpose for certification.
- ii. Isolation requirements are described in ' 222. C.1.c.
- iii. If the "seed@ of two virus-tested varieties are grown in the same field, they must be clearly identified and separated by at least 20 feet.
- iv. Land requirement for certified C1 fields is subject to ' 222 C.1.b. Land requirement for certified C2 and C3 fields is 2 years.

b. Specific Field Requirements (Vine Inspection):

<b>Presence or symptoms of:</b>	<b><u>Maximum Tolerance Allowed</u></b>		
	<b>Certified GI</b>	<b>Certified G2</b>	<b>Certified G3</b>
Bacterial Stem Rot ( <i>Erwinia chrysanthemi</i> )	none	none	none
Wilt ( <i>Fusarium oxysporum</i> f. sp. <i>batatas</i> )	none	none	none
Exotic or Hazardous Pests	none	none	none
Variety Mixture	none	none	none
Off-types (mutations)	0.05%	0.05%	0.10%

**D. Storage Requirements**

1. Before sweet potatoes grown for certification can be stored, the storage house must be cleaned and disinfected in a manner approved by LDAF.
2. Sweet potatoes grown for certification shall be stored in new containers (crates, pallet boxes, etc.) or used containers that have been disinfected and decontaminated in a manner approved by LDAF.
3. Certified seed roots shall be stored in a separate room from any noncertified roots.
4. Sweet potatoes from different field units shall be separated in storage by an aisle at least two feet wide.
5. A minimum of 20 percent of each lot of sweet potatoes entered for certification shall be inspected by LDAF during the storage inspection.

**E. Standards for Plant and Root "Seed"**

1. Plants:
  - a. apparently free of injurious disease, insects, or other pests;
  - b. true to variety characteristics;
  - c. of good color, fresh, firm, and strong;
  - d. of satisfactory size for commercial planting (cuttings approximately 8" - 12" long);
  - e. cuttings will be loosely packed and shipped in an upright position in boxes;
  - f. cuttings will not be shipped with other non-program plants.
2. Seed Roots:

- a. One storage inspection shall be made after harvest.
- b. Sweet potatoes for certification must be well shaped. The minimum size shall be one inch in diameter and four inches in length, 30 ounces maximum weight.
- c. Specific Seed Root Standards:

<b>Presence or symptoms of:</b>	<b><u>Maximum Tolerance Allowed</u></b>		
	<b>Certified GI</b>	<b>Certified G2</b>	<b>Certified G3</b>
Surface rots ( <i>Fusarium</i> spp.) & Soft Rots ( <i>Rhizopus</i> spp.)	5%	5%	5%
Bacterial Root Rot ( <i>Erwinia</i> spp.)	none	none	none
Black Rot ( <i>Ceratocystis fimbriata</i> )	none	none	none
Scurf ( <i>Monilochaetes infusans</i> )	1.0%	1.0%	2.0%
Streptomyces soil rot ( <i>Streptomyces ipomoeae</i> )	2.5%	2.5%	5.0%
Root-Knot Nematode ( <i>Meloidogyne</i> spp.)	5.0%	5.0%	5.0%
Russet Crack (a strain of SPFMV)	none	none	none
Internal Cork (a virus)	none	none	none
Wilt ( <i>Fusarium oxysporum</i> f. sp. <i>batatas</i> )	none	none	none
Sweetpotato Weevil ( <i>Cylas formicarius</i> var. <i>elegantulus</i> )	none	none	none
Exotic or hazardous pests	none	none	none
Variety Mixture	none	none	none
Off-types (mutations)	0.20%	0.20%	0.50%

#### **F. Certificate Reporting System**

1. The grower will be furnished numbered certificates of certification by the Louisiana Department of Agriculture & Forestry and shall:
  - a. issue a copy of the certificate to the purchaser for each shipment;
  - b. send a copy of each issued certificate to the Louisiana Department of Agriculture & Forestry within 10 days after each sale; and
  - c. maintain a copy of each issued certificate on file.

## **G. Sweet Potato Weevil Quarantine Area**

1. Sweet potato plants grown in a sweet potato-weevil quarantine area will be approved for seed or plant sources for use only within the quarantined area if:
  - a. all requirements for certification are met; and
  - b. there are no sweet potato weevils within a two-mile radius of the field or storage house.

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433

HISTORICAL NOTE: Promulgated by the Department of Agriculture & Forestry, Seed Commission, LR 25:1617 (September 1999)

## Subchapter D. Approval of Plant Breeders

### '223. Authority

In accordance with the provisions of Part I of Chapter II of Title 3 of the Louisiana Revised Statutes of 1950, the following qualifications herein are prescribed for approving plant breeders for growing and/or supervising the growing of breeder, foundation and/or registered agricultural seeds.

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Adopted by the Department of Agriculture, Seed Commission, (August 1961), repealed and readopted LR 12:825 (December 1986).

### '225. Definition of Terms Used

*Agricultural Seeds*—the seeds and/or propagation materials of grain, forage, cereal, fibre and nut crops and any other crops commonly recognized within the state as horticultural and agricultural field crops.

*Approved Plant Breeder*—a person qualified in accordance with the requirements set forth herein and approved by the commission.

*Breeder Seed*—the limited amount of seed used by the plant breeder in actually breeding or maintaining a strain or variety. Breeder seed is always under the direct supervision and control of the plant breeder and is never available for sale and use by the general public. Breeder seed is used for the production of foundation seed. Breeder seed must be tagged with a tag labeled Breeder Seed.

*Certificate*—an official document signed by the commissioner certifying that the holder is an approved plant breeder.

*Commission*—the Seed Commission as created in R.S. 3:14.32.

*Commissioner*—the Commissioner of Agriculture & Forestry of the State of Louisiana.

*Entomologist*—the entomologist of the Louisiana Department of Agriculture & Forestry.

*Foundation Seed*—the first generation progeny from breeder seed that has been tested for at least three years by the Louisiana Experiment Station, or similar institutions in other states and has proven its merit and has been released for commercial use.

*Registered Seed*—the first generation progeny from foundation seed that is so handled as to maintain satisfactory genetic identity and purity and has been approved and certified by the certifying agency.

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1431 and R.S. 3:1433.

HISTORICAL NOTE: Adopted by the Department of Agriculture, Seed Commission, August 1961, repealed and readopted LR 12:825 (December 1986).

## **' 227. Professional Service for Which an Approved Plant Breeder is Required**

- A. The supervision of an approved plant breeder is required for the growing of breeder seed according to the requirements of the rules and regulations of the Association of Seed Certifying Agencies.
- B. Any individual, firm or corporation desiring to be granted the status of a commercial plant breeding firm must submit to the Louisiana Seed Commission a general outline of their proposed methods of seed production for the breeder class of seed. This outline of methods of production must be approved by the Louisiana Seed Commission. This firm must also have an approved plant breeder who has qualified under ' 229 of these regulations. Production of all breeder seed must be under the direct and active supervision of the plant breeder. This firm's complete plant breeding and seed increase setup must be open to inspection by personnel of the state seed certifying agency.

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Adopted by the Department of Agriculture, Seed Commission, August 1961, repealed and readopted LR 12:825 (December 1986).

## **' 229. Qualifications for Approved Plant Breeders**

To be recognized officially by the Louisiana Department of Agriculture & Forestry as an approved plant breeder, a person must either:

- 1. hold an advanced degree with plant breeding as a major subject;
- 2. hold an advanced degree in agronomy or horticulture and show evidence of having at least one year's experience assisting a plant breeder at an experiment station or private seed farm;
- 3. hold a bachelor's degree in agronomy or horticulture with at least one course in plant breeding and show evidence of at least two years' experience as in 2;
- 4. hold a bachelor's degree in general agriculture, but not qualified under either 1, 2 or 3 above, must pass an examination at the direction of the state entomologist to indicate his knowledge of the subject (especially developing new varieties, variety testing, and increasing pure seed) and must show evidence of two years' experience as under Subsection 2 (Applicants qualifying under this Subsection may supervise the production of the class registered seed only.); or
- 5. must show evidence of competence in the form of the development of a distinct new variety of a crop and produced pure seed of it meeting the requirements for breeder seed (The person may supervise the production of breeder and/or foundation and/or registered only of the crop variety or varieties developed by him.)

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Adopted by the Department of Agriculture, Seed Commission, August 1961, repealed and readopted LR 12:825 (December 1986).

**' 231. Conditions Governing the Approval of Plant Breeders**

- A. Persons desiring to obtain a certificate as an approved plant breeder shall make application to the commission on a form supplied by the state entomologist.
- B. Applicants must qualify under the eligibility requirements set forth in ' 229.
- C. Applicants for a certificate qualifying under 1, 2, 3 and 4 of ' 229 shall supply with their application a copy of his college or university transcript; and in the cases of 2, 3 and 4 affidavits supporting the experience requirements indicated under 2; and under 5, supply affidavits and/or other documentary evidence supporting the requirements set forth herein.

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Adopted by the Department of Agriculture, Seed Commission, (August 1961), repealed and readopted LR 12:825 (December 1986).

**' 233. Plant Breeder Examination**

- A. Applicants to qualify for certification as plant breeders under ' 229.A.4, must pass a satisfactory examination, which may be either written or oral, or both, on the principles of plant breeding with special emphasis on the development of new varieties or strains of horticultural and agricultural crops and the handling of them thereafter.
- B. Examinations will be given by the state entomologist, or his designee, in his office in Baton Rouge, 10 days or later, at the convenience of the applicant, after the application has been approved by the commission.

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Adopted by the Department of Agriculture, Seed Commission, (August 1961), repealed and readopted LR 12:825 (December 1986).

**' 235. Issuance and Duration of Certificates**

- A. The issuance of certificates of approved plant breeders shall be by the commission after reviewing evidence of the commissioner that the requirements set forth in ' 231 have been complied with, or by the commissioner with the approval of the commission.
- B. Certificates of recognition of plant breeders shall be valid indefinitely, but may be canceled at any time for cause.

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Adopted by the Department of Agriculture, Seed Commission, (August 1961), repealed and readopted LR 12:825 (December 1986).

## **Subchapter E. Repeal of Prior Rules and Regulations**

### **'237. Repeal of Prior Rules and Regulations of the Seed Commission**

Upon promulgation of these rules and regulations, all rules and regulations previously adopted and/or promulgated by the Seed Commission are hereby repealed in their entirety.

AUTHORITY NOTE: Promulgated in accordance with R.S. 3:1433.

HISTORICAL NOTE: Adopted by the Department of Agriculture, Seed Commission, (August 1961), repealed and readopted LR 12:825 (December 1986).